E-Agricultural Services and Business

Independence in Evaluating Web-Sites Within Ministry of Agriculture

Edi Abdurachman *(Author)*
Center for Agricultural Data and Information
Ministry of Agriculture
Jakarta, Indonesia
edi@deptan.go.id

Yenni Tat *(Author)*
Center for Agricultural Data and Information
Ministry of Agriculture
Jakarta, Indonesia
yenni@deptan.go.id

***Abstract*—In promoting the use of Information Communication Technology (ICT) to increase the efficiency and the effectiveness of the government services, the Government of Indonesia has issued a Presidential Instruction No. 3/2003. The instruction asks that all Government institutions must make use of the ICT to increase its public services. In line with this, Ministry of Agriculture of Indonesia (MoA) has also done some efforts toward this; one of them is Web-site contest among units within MoA. The contest has been done since 2004. The contestants are grouped into three categories: 1. Directorate General/Agency level; 2. Agricultural Provincial Office; 3. Agricultural District Office.**

To implement the web-site contest, the MoA has appointed five jurors, which assisted by the Secretariat Committee Team. To evaluate whether any significant differences among jurors in giving the score to the web-site evaluated and what factors that might be related to the web-site scores, some analysis have been done. The variables are included in the analysis are Juror score, Juror, Level of the institution, Previous achievement in the contest, Location of the institution whether in Java or outside Java. The statistical methods used in the analysis are Multiple Linear Regression and Analysis of Variance. The analysis is based on the data from the MoA Web-site Contest for the year of 2008-2010. This research concludes that the jurors giving the score on web-site evaluated objectively. The factors that affecting the quality of the web-site are the institution level and achievement of the previous year (the best 3 or not).*(Abstract)***

Keywords-ICT, independence; evaluation; web-site; e-gov;

I. INTRODUCTION

Information Communication Technology (ICT) plays a major role in various aspects of live, including in running the government affairs. ICT can improve the productivity of civil servants.

In promoting the use of ICT to increase the efficiency and the effectiveness of the government services, the Government of Indonesia has issued a Presidential Instruction No. 3/2003. The instruction asks that all Government institutions must make use of the ICT to increase its public services. In line with this, Ministry of Agriculture of Indonesia (MoA) has also done some efforts toward this; one of them is Web-site contest among units within MoA. The contest has been done since 2004. The contestants are grouped into three categories: 1. Directorate General/Agency level; 2. Agricultural Provincial Office; 3. Agricultural District Office. To implement the web-site contest, the MoA has appointed five jurors, which assisted by the Secretariat Committee Team.

The objectives of the research are : 1. To know how objective the jurors giving the score on web-site evaluated; 2. To identify what other factors that affecting the quality of the web-site.

II. LITERATURE RIVIEW

2.1 E-Government

E-government, based on The World Bank definition is the use of information technology by government offices for better services to people, business and to facilitate cooperation among government institutions. The use of E-government is expected to empower the community through public access to information resources available [1]. Based on Ministry of Communication and Information Technology, E-government is an effort to develop the implementation of governance-based (use) electronically in order to improve the quality of public services effectively and efficiently.

Based on Presidential Instruction No. 3/2003 [2], the strategic objectives of e-government can be achieved through the implementation of 6 (six) closely related strategies, namely:

a. Develop a service system that is reliable, trustworthy, and affordable by the public;
b. Restructure management systems and work processes of government and the autonomous regional government in a holistic manner;
c. Optimally utilize information technology;
d. Increasing the role of the private sectors and develop the telecommunication industry and information technology;
e. Develop human resource capacity at both government and the regional government, coupled with the increasing e-literacy communities;
f. Carry out systematic development through the stages a realistic and measurable activities.

Based on the nature of the information transaction and public services provided by government through information networks, development of government can be implemented through 4 (four) stages as follows:

Level 1 - The preparations stage, include:
- Making information site in each institution;
- Preparation of human resources;

- Preparation of an easy-access facilities such as Multipurpose Community Center which provides facilities, internet cafes, SME-Center, etc.;
- Dissemination of information sites for both internal and to the public.

Level 2 – Maturation stage, include:
- Developing an interactive public information sites;
- Making a connection interface with other agencies.

Level 3 – Consolidation stage, include:
- Providing public services transaction site;
- Making application and data interoperability with other agencies.

Level 4 – Utilization stage, include:
- Making an application for service is G2G, G2B and G2C integrated.

2.2 How to Develop a Good Web-site

According to Ministry of Communication and Information Technology, there are 5 (five) issues that need to be considered in building and implementing a strategy online media publications [3], namely:

1. Usability - the purposes of what a local government Web-site created?
2. Responsibility - who owns the web-site and who is responsible?
3. Site management - how to provide service in responding public?
4. Content - how the materials provided, maintained, and presented in the form of online media?
5. Updating and maintenance - how to conduct monitoring and updating the information on local government web-site?

2.3 Government Web-site Development

Government Web-site can be said as a medium of information and communications from a government agency in public about anything related to government agencies concerned. Making government web-sites have targeted to the Indonesian people can easily gain access to information and services for government agencies.

Government web-site was made in accordance with the wishes of government in providing services to the community, namely:

1. Easy acquisition of information, true, fair, and broad coverage;
2. Dissemination of information through electronic media including:
   - All ingredients that have been published or materials that are outside copyright protection (can be known by the public);
   - All information created and collected according to the law (subject to considerations of commercial sensitivity and privacy);
   - All necessary documents for public interests.

   Government web-sites should focus on:

a. Provision of information and public services that people want to continually evolve in the provision of information and public services;
b. Achieving universal accessibility and usability;
c. Provision of interactive services;
d. Discriminatory treatment not for visitors, it means the government web-site can be opened without distinguishing facilities and computer capabilities possessed by the visitors.

One of the key commitments from the government is to provide community services that are responsive in meeting the needs of all different groups in society.

2.4 Standarization of Web-Site Development

Based on the Web-site Management Handbook publised by the Ministry of Communication and Information Technology in August 2003, the most important element of an effective web-sites on the Internet is must be good content and design [4]. Government web-site content is the information delivered by a government agency to the public. Government web-sites is a government-owned communications media, and therefore the information conveyed not only information initiated from government agencies (one-way communication), but also must consider information needed by the community (two-way communication). Minimum content of government web-sites differ between the central government agency web-sites and web-sites of local government agencies.

Minimum content of the central government agencies web-site are:

a. Organization of central government institutions

Explaining the vision and mission, duty and function, organizational structure, the Strategic Plan, Echelon II officials (if possible include e-mail address), biodata of the minister and first echelons, the information (office address, phone / fax, e-mail address) of government agencies.

b. News

Each central government agency web-site must present news related to their institutions. News is presented can be from the internal institutions of the central government or from media (central and regional).

c. Regulation/Policy

Regulation/policy and all its derivatives, which have been issued by the related central government agencies. The web-site of central government institutions is one of the media to disseminate regulations/policies which have been released to the public.

d. Description of the Directorate-General/Deputy

Assuming that not all people know exactly about the organization and what kind of information is available at a central government agency, then on the web-site of the central government agencies should have a detailed description of the Directorate-General or Deputy within respectives institutions. If possible, provides a link to the web-site of each Directorate.

Minumum contents of local government web-sites are:

1. At a Glance

Explain briefly on the existence of the Local Government (history, local motto, symbols and meaning of symbols, location in map form, vision and mission).

2. Local Government

Describe the structure of organizations in the respective Local Government (executive, legislative) along with name, address, phone, e-mail from local officials. If possible biodata of the Regional Leadership is shown to the wider community.

3. Geography

Explains among other things, the topography, demographics, weather and climate, social and economic development, culture of the area concerned. All information in the form of numerical or descriptions should include the information of the source data.

4. Area Map Resources

Presents in the form of district boundary map of the area (preferably use a reference map issued by the Coordinating Agency for Surveys and Mapping Agency - Bakosurtanal, or other government agencies that have a fundamental duty and function of the map maker), and also the resources owned by the respective regions in the form of maps resources (used in reference maps issued by government agencies that have a fundamental duty and function of the map maker) that can be used for the purposes of the user.

5. Regulation/Policy Areas

Explaining the Regional Regulation issued by the Local Government. Through this web-site all the new local legislation, that has been issued, can be disseminated to the public.

6. News

News from the local government institutions, not taken from local newspapers. It is expected that local government news web-site to be a reference to the news published by local newspapers.

In addition to the contents of at least six of the above, government web-sites also must be capable of interacting with the public through two-way communication between managers and web-site visitors through the Forum Discussions, suggestions, visitors in the guestbook.

Homepage on a web-site identical to the cover of a book which was published previously. An interesting form of the homepage will have the impression for visitors to the web-site to learn more about the contents of the web-site concerned. A homepage of the web-site of the local government at least must present information on the following matters:

1. Name of Local Government;
2. Logo or symbol of the Local Government;
3. Office address, telephone and fax numbers, e-mail address of the Local Government;
4. An image that provide information on something interesting from the respective regions (landmarks), can be shaped landscape, monumental buildings, or superior products;
5. A text relating to the existence of local government web-site (jargon);
6. Contact e-mail (e-mail address of the Site Manager) to submit a request or information;
7. Links to the content available on the web-site of local government;
8. Search facility.

In addition to the contents of web-site, things that need to be handled by local government web-site administrator is the default web-site design presentation (visualization), which includes the homepage and navigation, the form of text and graphics display standard that is used, HTML (Hyper Text Markup Language).

There are many factors for consideration to determine whether the poor quality of a web-site, and everyone certainly has a different view. But among the many, there are several things that have been commonly used reference [5], namely:

1. Download speed

Internet users in general do not like waiting. They do not like to linger just to wait for the emergence of the accessed information from the web. As much as possible the manager must optimize web design in order not to be too heavy to be accessed, even if using dial-up connection. The ideal speed of about 8-12 seconds. Optimize return web components (images, HTML, JavaScript, CSS) if you have not reached that number.

2. Contents readability

As much as possible not to use too small font, and color contrast that makes eyes tired quickly. Make your guests comfortable for reading the information provided, without having to change the font settings on your browser or even to change Brightness & Contrast on the monitor.

3. Consistent design layout

Design from one page to another must be made consistent to facilitate visitors to find content that is provided. Visitors will get confused if the menu is placed on the first page and second arbitrary position. Create a visitor easily adaptable, with a lightweight design and navigation is user friendly.

A government web-site should focus on:

a. Provision of information and public services that people want to continually evolve in the provision of information and public services;
b. Achieving universal accessibility and usability;
c. Provision of interactive services;
d. Discriminatory treatment not for visitors, it means the government web-site can be opened without distinguishing facilities and computer capabilities possessed by the visitors.

2.5 Government Web-site Ranking

To determine the level of capability, reliability, and quality of a government web-site, the Ministry of Communications and Information Technology assessing all government web-sites on the Internet. There are 11 (eleven) parameters used for the assessment of government web-sites. They are:

1. Speed;
2. Homepage;
3. Contents;
4. Context;

5. Measure the quality of interaction (usability);
6. Readibility;
7. Mobility data;
8. Accuracy;
9. Public service;
10. Hits;
11. Use of platform.

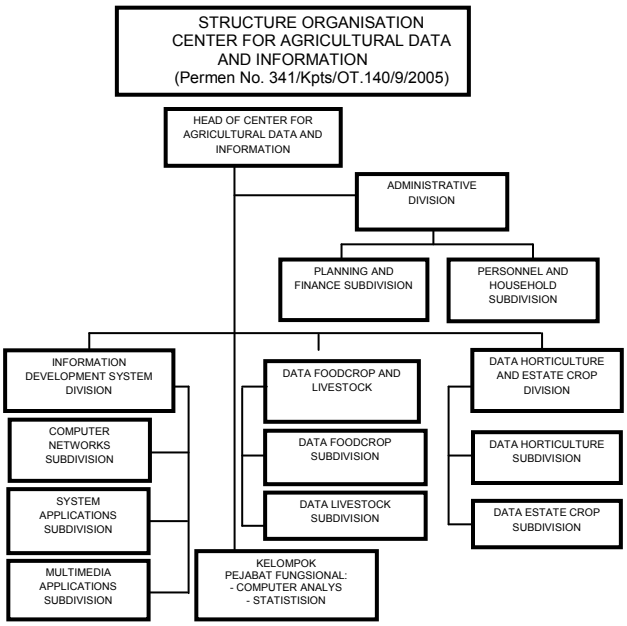
Based on 11 parameters above, an assessment of government web-sites were classified in the four criteria in order to perform the determination of the government web-site rating. The four criteria to evaluate a government web-site are:

1. The web-site functions;
2. The web-site quality;
3. View web-site;
4. Innovation.

2.6 MoA: Organization Structure, CADI

Center for Agricultural Data and Information (CADI) is a supporting office within the Secretariate General of the MoA that responsible for the development of agriculture information system. The function of CADI is to develop agricultural information system, provide data and information services, and provide guidance for other institutions within MoA [6].

Based on the Ministerial Decree No. 341/Kpts/OT.140/9/2005 dated September 8, 2005, the organization of CADI comprises of Information System Development Division, Data Foodcrop and Livestock Information Services Division, Data Horticulture and Estatecrop Information Services Division, Administrative Affairs Division and Functional Staffs (Annex Table 1).



Annex Table 1. Organization Structure, CADI.

CADI has a vision of providing accurate and reliable agricultural data and information, and its mission are developing statistical methodology, keeping up and improving agricultural information system, providing and distributing the agricultural data and information, building up and providing qualified as well as reliable agricultural human resources.

With this mission, each operating unit within MoA should also functions as an information center, which collect, compile and develop database, and conduct statistical analysis and dissemination, in order to provide information to all users, and primarily to fulfill the needs of its own regions all over the country. For this purpose, it is necessary that all information centers be connected to each other through communication media such as Internet.

2.7 The Development of e-Gov in MoA

The development of e-Governmnet in MoA initiated with the construction of the MoA web-site. Web-site development of the MoA (http://www.deptan.go.id) was started in 1996 [7]. CADI initiated these activities by providing a menu that displays various data and agricultural information. In the following years web-site development is done by completing of menu that displays the information by category related to the function of Echelon I within the MoA. Also, in line with developments of information technology, the MoA web-site was developed as an interactive communication medium in the dissemination of agricultural information and data.

Furthermore, as part of its commitment to its service excellence in providing and disseminating data and information to all users, since 2002 has established a Web-site Management Working Group of the MoA and Editorial Team estabilised by Decree of the Minister of Agriculture No.508 and 509 Kpts/Kp.150/9/2002. The team members consist of management data and information across all units of the Echelon II within of the MoA. Activities and updating of the data and information become more coordinated. In addition, it has gradually built Echelon I web-site that provides information according to their respective functions in the Echelon II.

2.8 Web-site Contest within Ministry of Agriculture

In an effort to maintain continuity of the MoA web-site development, since 2004, CADI has conducted a web-site competition among Echelon I of the MoA. The following year, in addition to competition among the Echelon I web-sites, its also implemented a web-site competition among the Local Government Unit of the provincial agriculture offices and the Local Government Unit agricultural districts offices.

The purpose of the conducting the web-site competition are:

1. To motivate all the Echelon I of the MoA, all the provincial and district agriculture offices to provide and update data and information displayed;
2. To support the acceleration of the implementation of e-Government;
3. To provide services to the people who communicate and interact with the government institution.

To carry out the assessment web-site, CADI appoint five jurors from five different agencies. Assessment criteria for

the web-site competition refers to the parameters used by the Ministry of Communications and Information Technology in the conducting of government web-site rating. The criteria used is the content of web-sites, web-site features; public services, quality of web-sites; and innovation on the web-site.

The positive impact of conducting the web-site competition is more frequent orderly updating of their respective web-sites offices of the provincial and district agriculture offices. This makes the MoA web-site content is also increasingly enriched with links to each of the regional dan district web-sites.

III. RESEARCH METHOD

Data Collection Method

Data used in this study was obtained from the web-site competition of the year 2008-2010. Variables used are the score given by the jury, the jury, the level of institutions (whether central, provincial, or district), achievement the previous year (the best 3 large or not), and location of institution (whether in or outside of Java).

The data to be analyzed consists of the average value of the jury for the 12 team of Echelon I web-site, the 10 of the web-sites of provincial agricultural offices, and the 10 of the agriculture district offices web-site with a rating scale of 1-100.

Research Model

This study aims to determine how the jurors giving the score on web-site evaluated and to identify what other factors that affecting the quality of the web-sites.

To evaluate whether there are significant differences among the judges in giving scores to the web-site evaluated, the an Analysis of Variance (ANOVA) statistical methods was used. The hypothesis is the following:

H_0: $\mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5$

H_1: at least one $\mu_i \neq \mu_j$

Level of significance (α) used in this study is 0.05. If *F value* $\geq$ *F critical* value then reject H_0, but if the *F value* $<$ *F critical* then accept H_0.

Description:

μ_1 = avarage scores of the jury -1
μ_2 = avarage scores of the jury -2
μ_3 = avarage scores of the jury -3
μ_4 = avarage scores of the jury -4
μ_5 = avarage scores of the jury -5

To identify what other factors that affecting the quality of the web-sites, Multiple Linear Regression Analysis was used. It will be analyzed whether the jury was influenced by the level of institutions (whether located at the central level, provinces, or districts), achievement of the previous year; and location (outside of Java, or Java). Regression model to be tested are:

$$Y = \beta_0 + \beta_1 L_1 + \beta_2 L_2 + \beta_3 A + \beta_4 L + \varepsilon$$

Description:

Y = average value of jury
β_0 = constant
β_1 = coefficient of the dummy of the institution level-1
β_2 = coefficient of the dummy of the institution level-1
β_3 = coefficient of the dummy variable for the achievement of the previous year
β_4 = coefficient of the dummy location
L_1 = dummy variable-1 for the institution level
L_2 = dummy variable-2 for the institution level
A_1 = achievement the previous year (the best 3 large or not)
L = location

To determine whether the variable affect the dependent variable (Y), an individual coefficient regression testing will be done partially. The hypothesis used was:

H_0: $\beta_i = 0$ with i = 0,1,2,3,4

H_1: $\beta_i \neq 0$

Level of significance (α) used was 0.05. If *P-value* $<\alpha_{0.05}$ then reject H_0, but if the *P-value* $\geq \alpha_{0.05}$ then H_0 is accepted.

IV. RESULTS

To calculate the ANOVA, the analysis are done by using Microsoft Office Excel 2007. The result of the statistical tests are as follows:

- Category Echelon I - year 2008
  From the Annex Table 1. is shown that $F_{7.69} \geq F_{2.54}$, so we can conclude that H_0 is rejected at $\alpha_{0.05}$ which means that at least there are two jurors who gave different assessments on the web-site in 2008.
- Category Echelon I - year 2009
  From the Annex Table 2. is shown that $F_{1.37} < F_{2.54}$, so we can conclude that H_0 is accepted at $\alpha_{0.05}$ which means that the jury gave the same assessment on the web-site in the year 2009.
- Category Echelon I - year 2010
  From the Annex Table 3. is shown that $F_{1.47} < F_{2.54}$, so we can conclude that H_0 is accepted at $\alpha_{0.05}$ which means that the jury gave the same assessment on the Echelon web-site in 2010.
- Category Province - year 2008
  From the Annex Table 4. is shown that $F_{14.88} \geq F_{2.58}$, so we can conclude that H_0 is rejected at $\alpha_{0.05}$ which means that at least there are two jurors who gave different assessments on the web-site provincial agricultural office in the year 2008.
- Category Province - year 2009
  From the Annex Table 5. is shown that $F_{4.82} \geq F_{2.58}$, so we can conclude that H_0 is rejected at $\alpha_{0.05}$ which means that at least there are two jurors who gave different assessments on the web-site provincial agricultural office in the year 2009.
- Category Province - year 2010
  From the Annex Table 6. is shown that $F_{1.62} < F_{2.58}$ so we can conclude that H_0 is accepted at $\alpha_{0.05}$ which means that the jury gave the same assessment on the scope of the web-site provincial agricultural office in the year 2010.

- Category District - year 2008

From the Annex Table 7. is shown that $F_{62.49} \geq F_{2.58}$, so we can conclude that H_0 is rejected at $\alpha_{0.05}$ which means that at least there are two jurors who gave different assessments on the web-site district agricultural office in the year 2008.

- Category District - year 2009
  From the Annex Table 8. is shown that $F_{10.72} \geq F_{2.58}$, so we can conclude that H_0 is rejected at $\alpha_{0.05}$ which means that at least there are two jurors who gave different assessments on the web-site district agricultural office in the year 2009.
- Category District - year 2010
  From the Annex Table 9. is shown that $F_{0.74} < F_{2.58}$, so we can conclude that H_0 is accepted at $\alpha_{0.05}$ which means that the jury gave the same assessment on the web-site district agricultural office in the year 2010.

To determine the significance of the regression model of each year, the assessment used the following Annex Tables:

- Jurors assessment in 2008:
  Annex Table 10. shows that only the *P-value* for the variable-2 for the institution level and achievement the previous year (the best 3 large or not) that smaller than $\alpha_{0.05}$ which means for these variables reject H_0. So the estimate regression model is:
  $\hat{Y}_{2008} = 62.57 + 5.5L_2 + 9.1A.$
- Jurors assessment in 2009
  Annex Table 11. It can be seen that variable for location have $P\text{-}value_{0,60} > \alpha_{0.05}$ which means that for this variable accept H_0 and other variables rejected H_0. So the estimate regression model is:
  $\hat{Y}_{2009} = 42.27 + 12.97L_1 + 15.79L_2 + 18.15A.$
- Jurors assessment in 2010
  Annex Table 12. shown that only the *P-value* for the variable-1 for the institution level and achievement the previous year (the best 3 large or not) that smaller than $\alpha_{0.05}$ which means for these variables reject H_0. So the estimate regression model is:
  $\hat{Y}_{2010} = 55.05 + 13.72L_1 + 16.69A.$

V. CONCLUSION AND RECOMMENDATION

From the results of statistical test, the assessment of the jury for the category of Echelon I within of the MoA in year 2009 and 2010 tended to rate better than in year 2008 because the average value of each of the jurors did not differ significantly. Assessment of the provincial level, the avarage score given by the the jury were significantly different only in the year 2008 and 2009. Similarly, the analysis show that the same conclusion obtained for the category of the district agricultural offices.

From the regression results of the year 2008, we can conclude that variable-1 for the institution level and variable location of the central agencies (outside of java or java) does not influence scoring given by the jury. Factor that affecting the scores are variable-2 for the institution level and achievement of the previous year (the best 3 or not). Both variables make a positive contribution in the assessment of each jury. For the year of 2009 regression results, variable institution level and achievement the previous year (the best 3 or not) was also influenting in the assessment of the jury. In the year of 2010, which affect the assessment of judges are the institution level and achievement the previous year (the best 3 or not).

REFERENCES

[1] Pusat Sumberdaya Geologi, "Pengembangan dan Implementasi e-Government" http://psdg.bgl.esdm.go.id/makalah/e_Gov%20PSDG.pdf.

[2] Instruksi Presiden Nomor 3 Tahun 2003.

[3] Kementerian Komunikasi dan Informasi, "Panduan Penyelenggaraan Situs Web Pemerintah Daerah", 2003.

[4] Kementerian Komunikasi dan Informasi, "Acuan Rating Situs Web Pemerintah".

[5] Kualitas Web-site menurut SEO, [http://illtorro.blogspot.com/2009/07/kualitas-web-site-menurut-seo.html].

[6] Leaflet Pusdatin 2010.

[7] Pusdatin, "Panduan Penyelenggaraan Lomba Situs Web", 2010.

Annex Table 1. ANOVA Table Testing Differences Among Jurors for Echelon I Category for the year of 2008

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
juri1	12	628.2500	52.3542	52.2438
juri2	12	766.7100	63.8925	153.7289
juri3	12	793.5500	66.1292	67.2298
juri4	12	775.5000	64.6250	307.0398
juri5	12	934.5000	77.8750	60.2670

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	3939.8621	4	984.9655	7.6889	0.0001	2.5397
Within Groups	7045.6020	55	128.1019			
Total	10985.4641	59				

Annex Table 2. ANOVA Table Testing Differences Among Jurors for Echelon I Category for the year of 2009

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
juri1	12	752.9893	62.7491	351.9230
juri2	12	803.6500	66.9708	555.0384
juri3	12	617.0500	51.4208	393.7957
juri4	12	828.0400	69.0033	248.3570
juri5	12	772.2571	64.3548	508.0570

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	2252.7928	4	563.1982	1.3689	0.2567	2.5397
Within Groups	22628.8812	55	411.4342			
Total	24881.6740	59				

Annex Table 3. ANOVA Table Testing Differences Among Jurors for Echelon I Category for the year of 2010

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
juri1	12	901.0000	75.0833	92.0833
juri2	12	784.0000	65.3333	301.5152
juri3	12	756.0000	63.0000	494.0000
juri4	12	869.0000	72.4167	129.5379
juri5	12	873.0000	72.7500	104.0227

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	1315.4333	4	328.8583	1.4666	0.2249	2.5397
Within Groups	12332.7500	55	224.2318			
Total	13648.1833	59				

Annex Table 4. ANOVA Table Testing Differences Among Jurors for Province Category for the year of 2008

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
juri1	10	633.3400	63.3340	16.4844
juri2	10	639.2500	63.9250	84.2785
juri3	10	714.5000	71.4500	10.8444
juri4	10	774.1500	77.4150	26.6973
juri5	10	791.0000	79.1000	42.8778

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	2157.7787	4	539.4447	14.8868	0.0000	2.5787
Within Groups	1630.6415	45	36.2365			
Total	3788.4202	49				

Annex Table 5. ANOVA Table Testing Differences Among Jurors for Province Category for the year of 2009

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
juri1	10	636.4000	63.6400	308.3538
juri2	10	693.0000	69.3000	193.3444
juri3	10	488.5000	48.8500	173.3783
juri4	10	726.0000	72.6000	86.4889
juri5	10	693.9286	69.3929	166.5751

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	3579.2301	4	894.8075	4.8204	0.0025	2.5787
Within Groups	8353.2650	45	185.6281			
Total	11932.4951	49				

Annex Table 6. ANOVA Table Testing Differences Among Jurors for Province Category for the year of 2010

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
juri1	10	735.0000	73.5000	23.1667
juri2	10	641.0000	64.1000	154.1000
juri3	10	719.0000	71.9000	42.9889
juri4	10	766.0000	76.6000	15.1556
juri5	10	653.0000	65.3000	657.5667

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	1159.2800	4	289.8200	1.6228	0.1850	2.5787
Within Groups	8036.8000	45	178.5956			
Total	9196.0800	49				

Annex Table 7. ANOVA Table Testing Differences Among Jurors for District Category for the year of 2008

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
juri1	10	509.0000	50.9000	12.5167
juri2	10	562.7500	56.2750	40.2840
juri3	10	705.3500	70.5350	5.4095
juri4	10	709.0600	70.9060	20.6094
juri5	10	790.6600	79.0660	28.5724

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	5368.6642	4	1342.1660	62.4891	0.0000	2.5787
Within Groups	966.5286	45	21.4784			
Total	6335.1928	49				

Annex Table 8. ANOVA Table Testing Differences Among Jurors for District Category for the year of 2009

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
juri1	10	383.8000	38.3800	132.9996
juri2	10	520.0000	52.0000	189.5556
juri3	10	360.3000	36.0300	88.4490
juri4	10	675.0000	67.5000	152.9444
juri5	10	555.8571	55.5857	219.2492

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	6715.8464	4	1678.9616	10.7186	0.0000	2.5787
Within Groups	7048.7799	45	156.6396			
Total	13764.6263	49				

Annex Table 9. ANOVA Table Testing Differences Among Jurors for District Category for the year of 2010

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
juri1	10	626.0000	62.6000	495.6000
juri2	10	480.0000	48.0000	379.3333
juri3	10	566.0000	56.6000	481.1556
juri4	10	608.0000	60.8000	492.8444
juri5	10	610.0000	61.0000	514.4444

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	1397.6000	4	349.4000	0.7392	0.5702	2.5787
Within Groups	21270.4000	45	472.6756			
Total	22668.0000	49				

Annex Table 10. Regression Analysis of the Jurors Assesment for the year of 2008

Regression Statistics	
Multiple R	0.7575
R Square	0.5738
Adjusted R Square	0.5107
Standard Error	4.6408
Observations	32

ANOVA

	df	SS	MS	F	Significance F
Regression	4	783.0422	195.7605	9.0895	0.0001
Residual	27	581.4995	21.5370		
Total	31	1364.5416			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95,0%	Upper 95,0%
Intercept	62.5671	1.9409	32.2365	0.0000	58.5847	66.5494	58.5847	66.5494
L-1	-0.2612	2.1869	-0.1195	0.9058	-4.7485	4.2260	-4.7485	4.2260
L-2	5.5480	2.0871	2.6583	0.0130	1.2657	9.8303	1.2657	9.8303
The best 3 or not	9.1161	1.9171	4.7552	0.0001	5.1826	13.0496	5.1826	13.0496
Location	0.3901	2.1995	0.1774	0.8605	-4.1228	4.9031	-4.1228	4.9031

Annex Table 11. Regression Analysis of the Jurors Assesment for the year of 2009

Regression Statistics	
Multiple R	0.6990
R Square	0.4886
Adjusted R Square	0.4128
Standard Error	11.9719
Observations	32

ANOVA

	df	SS	MS	F	Significance F
Regression	4	3697.1401	924.2850	6.4488	0.0009
Residual	27	3869.7983	143.3259		
Total	31	7566.9384			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95,0%	Upper 95,0%
Intercept	42.2703	5.4745	7.7213	0.0000	31.0375	53.5031	31.0375	53.5031
L-1	12.9717	5.4591	2.3762	0.0248	1.7706	24.1728	1.7706	24.1728
L-2	15.7915	5.6435	2.7982	0.0094	4.2121	27.3710	4.2121	27.3710
The best 3 or not	18.1481	4.9677	3.6532	0.0011	7.9552	28.3410	7.9552	28.3410
Location	3.1218	5.9475	0.5249	0.6039	-9.0813	15.3250	-9.0813	15.3250

Annex Table 12. Regression Analysis of the Jurors Assesment for the year of 2010

Regression Statistics	
Multiple R	0.6307
R Square	0.3978
Adjusted R Square	0.3086
Standard Error	12.4224
Observations	32

ANOVA

	df	SS	MS	F	Significance F
Regression	4	2752.5410	688.1353	4.4593	0.0068
Residual	27	4166.5077	154.3151		
Total	31	6919.0488			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95,0%	Upper 95,0%
Intercept	55.0484	5.8204	9.4579	0.0000	43.1060	66.9908	43.1060	66.9908
level1	13.7172	5.6537	2.4262	0.0222	2.1168	25.3176	2.1168	25.3176
level2	11.1917	6.0801	1.8407	0.0767	-1.2835	23.6670	-1.2835	23.6670
tigabesar	16.6869	4.9842	3.3480	0.0024	6.4603	26.9136	6.4603	26.9136
lokasi	-3.2207	6.1766	-0.5214	0.6063	-15.8940	9.4526	-15.8940	9.4526