

# Identifying and Ranking the Effects of Deployment of an Online Document Registration System in Order to Reduce Crimes Using the DEMATEL Method

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## Abstract

The aims of this research is to identify and rank the effects of deployment of an online document registration system in order to reduce crimes. The research method is applied in terms of its objectives, it is descriptive-survey in terms of data collection method, and quantitative in terms of data analysis method. The statistical population of this study includes 4 experts in the field of online document registration of notary public offices of Mashhad City in Iran. For doing this survey the effects and consequences of the establishment of an online document registration system are identified by referring to the previous researches and a questionnaire is developed using the Delphi technique. According to the experts' opinion, the results indicate that the eight factors are identified as factors affecting the establishment of an online document registration system in order to reduce crimes. Also, to assess the rating and importance of each dimension in terms of impact on and being influenced by each other, a questionnaire based on DEMATEL method is distributed among experts. The collected data has been analyzed using the BT DEMATEL SOLVER software. Results show that the most influential factor is reduction of

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forgery of documents and the factor that has been greatly affected is prevention of speculation.

**Keywords:** Document Registration System, Electronic Documents, Reduction of Documentation Crimes

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Cite this article: Ghadamyari, M., Torshizi, H. A., & Tabrizi, G. T. (2017). Identifying and Ranking the Effects of Deployment of an Online Document Registration System in Order to Reduce Crimes Using the DEMATEL Method. *International Journal of Management, Accounting and Economics*, 4(11), 1106-1121.

## Introduction

Today, the significant role of the notary public offices in setting contracts for individuals (real or legal) is not borne by anyone (Kiani, 2009). With the advancement of human societies and the complexity of social and economic relations and the development of new information technologies, the type and nature of crimes in the field of document registration has also been altered and complicated (Najafi, 2008). Accordingly, the law of notary public offices also undergone major changes such as doing all the affairs of the office through the electronic document registration system (instantaneous filing) (Fatemian et al, 2015). Because the deployment of an online document registration system speeds up registrations through access to precise, accurate, and timely information (Broderick Martha, 2011) and prevents potential mistakes and subsequent criminal offenses (Katouzian, 2001; Hajiani, 1996). On the other hand, based on Chapter VI of the Registration Rules and Regulations and Article 100, which refers to the explanation and description of the registration crimes (Hajian Golbini, 2007; Nazari, 2015), these crimes may occur both in the registry offices and in the notary public offices (Gasson, 2008). The use of electronic documents has made it possible for the notary public offices to be freed from time and space (Esfandiari Bayat, 2013) and provide their customers with more services overnight (Hedarnia Fathabadi, 2010) and on the other hand, has questioned traditional methods of providing services (generally based on paper) and the need to review and re-design work processes has felt more than before (Salahshoor, 2009). Although electronic registration is more likely to be used to register electronic transactions, especially the Internet (Duff & Marshall, 2010), this does not mean that it cannot be used in ordinary transactions. Therefore, an electronic copy can be taken from paper documents and register them observing the necessary conditions (Akbarzadeh, 2014). Of course, it is obvious that the parties rarely accept these conditions and prefer to register in the traditional way (Elsan, 2011).

By studying the work experience of the notary public offices, it is found that during the formation of notary public offices, heads of offices have repeatedly been prosecuted for rule ignorance or negligent of rule implementation or have been required to compensate for damages. These offenses by the heads of offices formed a small part of the registration crimes, because the vast majority of the heads of the offices are the trusted individuals of the country's registration system. A large part of the registration crimes occurred when people with false or inauthentic documents referred to the office for the purpose of registering documents, which have been drawn up due to the lack of knowledge of the heads of the notary public offices of false documents or false evidence.

In some cases, voters and fraudsters introduced another person to sign the document by changing the ID card photo. Accordingly, these violations have had many consequences and have led to the creation of numerous cases in the country's judicial system. In the implementation of paragraph "g" of Article 46, paragraph "b" of Article 48, paragraph "m" of Article 211 of the Fifth Five-Year Development Plan of the Islamic Republic of Iran, paragraph "c" of the Health Promotion System of the Administrative System and Counter Corruption, as well as Article 37 of the State Service for the Administration of Civil Law, Organization of Registration of Documents and Real Estate of the Country obliged the heads of the notary public offices to issue all of their official documents and related affairs through the electronic system of documents from September 26, 2013, which led to the prevention of crimes such as forgery by the notary, the use of forged document by the client or the head, selling of others' properties, paperwork, trial prorogation, administrative corruption, speculation, tax evasion, transparency of transactions, reduction of people's referrals, opposing transactions, reduction of abuse of identity documents of deceased people, reduction of the possibility of using fake identity documents and reduction of the use of identity documents of others. In this research, the role of online registration system in the prevention of registration crimes that are usually occurring in notary public offices is studied and its consequences and results are examined according to the personal experience of the researcher in the field of notary public offices. Nevertheless, at the beginning of the electronic registration process, the heads had some resistances in this regard and suggested good reasons for not implementing the plan, such as the low speed of the Internet, obliging the notary to draw up the documents using the new system took his freedom, and technical problems related to the system itself. However, in this research, it is attempted to examine the effects and results of the establishment of an online document registration system on the prevention of registration crimes. The crimes that happened so much in the past are part of the body of the community and have affected the heads of the offices. Although this system has many challenges and bugs, but these are not so much that the use of this system can be ignored. So, what's the main question behind the mindset of the researcher is what are the effects and results of establishing an online document registration system? How is the ranking of these effects?

### **Research Questions**

1. What are the effects and results of establishing an online document registration system?
2. How is the ranking of the effects and results of establishing an online document registration system?

### **Research Background**

Asadollahi (2015) conducted a research entitled "identifying registration crimes in notary offices and the role of the online registration system in the city of Zahedan" and concluded that the use of an online document registration system reduces crimes such as forgery of documents, impersonation, tax evasion and trial prorogation. Nazari (1394) also carried out a study as the role of the online registration system in preventing registration crimes and the results showed that with the mandatory draw up of documents

as an instant registration system, the amount of registration crimes was significantly reduced in Tehran notary public offices and leads to a situation whereby the opportunity for specific groups of crimes is reduced by increasing the risks and problems of committing such crimes and reducing its profits. Elsan (2011) also conducted a research entitled “document registration and information technology, the confluence of tradition and innovation” and distributed a questionnaire among 25 notaries who had an electronic registration system, concluding that using digital signatures, validation of individual identities, reduction of paperwork are among the important effects of the use of information technology in the document registration system. In addition, Tavasoli (2010) also carried out a study entitled as “the role of the document registration organization in the prevention of crimes” and concluded that the document registration organization can prevent the occurrence of registration crimes through taking signature samples, fingerprints, familiarity of people with registration crimes, harsh laws for those who want to commit a crime in the registration field, and keeping documents in a safe place. Heidarnia Fathabadi (2010) also conducted a research on pathology of registration affairs and interviewed 10 experts of registration affairs and notary office heads, concluding that factors such as old laws, huge costs, redundant offices, and lack of information technology infrastructure were identified as important damages in registration affairs. Najafi (2008) carried out a study entitled as “crime prevention methods and combating corruption in the registration field” and interviewed eight notary office heads and judges on registration crimes, concluding that factors such as development of technology in administrative and registration affairs, rectification of procedures and registration of documents, review of laws and regulations on registration crimes, continuous training of employees and service providers in the field of registration of documents, clarification of operations and registration affairs, servicing and arranging trading companies, and paying attention to the welfare state and livelihood of employees are crime prevention and combat strategies in the field of document registration. Fatemian et al. (2015) carried out a study entitled "a study on the concepts and definitions and outcomes of the electronic document notary public office" and concluded that in some developing countries, the traditional laws prevent the proper deployment of this system, while in advanced countries like France, this system has added to the security of electronic documents. Bowman et al. (2013) conducted a study entitled as “investigating the impact of the health of electronic document registration systems on the integrity, quality and safety of information implications”. The results indicated that the use of healthy electronic registration systems has a positive and significant impact on the integrity, quality and safety of information implications. Daniel & Greenwood (2006) also conducted a research entitled as "what is electronic notary public office? Why is it needed? And how it works?" and came to the conclusion that electronic notary offices can prevent impersonation and can prevent paperwork and increase trust among customers using encrypted computers.

### **Method of research**

The research method is applied in terms of its objectives, it is case-field in terms of its approach, and quantitative in terms of data analysis method. The statistical population of this study includes 4 experts in the field of online document registration of notary public offices of Mashhad and 2 faculty members and university experts who are willing to

cooperate in this study. They were surveyed through complete enumeration method. The Delphi technique was used to identify the effects of deploying online document registration system on reducing crime. It was found that the eight factors of the reduction of forgery of documents, reduction of impersonation, tax evasion, prevention of corruption, prevention of a forged document, prevention of counteraction, reduction of paperwork, and prevention of speculation are confirmed as identified factors affecting the establishment of an online document registration system in order to reduce crimes, which is shown in Table 1. Also, to assess the rating and importance of each dimension in terms of impact on and being influenced by each other, a questionnaire based on DEMATEL method is distributed among experts. The collected data has been analyzed using the BT DEMATEL SOLVER software.

## Results

**After First Question:** What are the effects and results of establishing an online document registration system?

Table 1 effects and results of establishing an online document registration system achieved through Delphi technique

No.	Dimensions	References
1	reduction of forgery of documents	Asadollahi (2015), Nazari (2015), Tavassoli (2010)
2	reduction of impersonation	Asadollahi (2015), Nazari (2015), Elsan (2011), Tavassoli (2010)
3	prevention of tax evasion	Asadollahi (2015), Najafi (2008)
4	prevention of administrative corruption	Najafi (2008)
5	prevention of a forged document	Bowman et al. (2013), Daniel and Greenwood (2006)
6	prevention of counteraction	Nazari (2015)
7	reduction of paperwork	Asadollahi (2015), Elsan (2011), Heidarnia Fathabadi (2010), Daniel and Greenwood (2006)
8	prevention of speculation	Fatemian et al. (2015)

**Second Question:** how is the ranking of the effects and results of establishing an online document registration system?

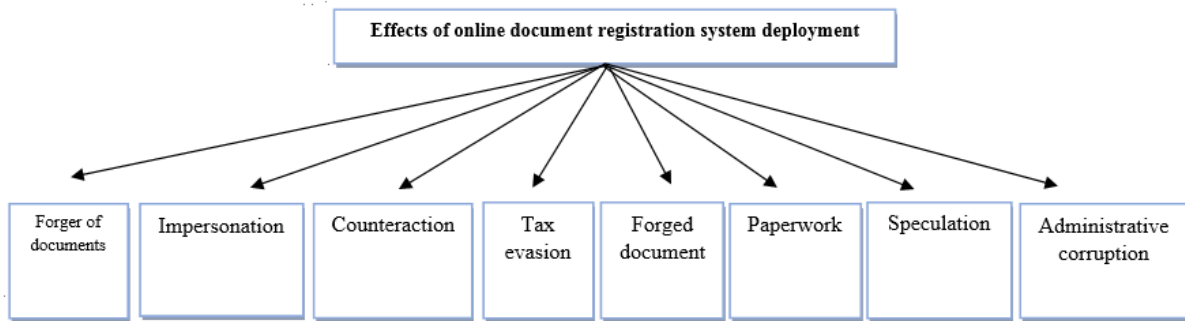


Figure 1 conceptual model of the study

In this research, seven criteria as given in Table 2 have been used for the comparison.

Table 2 Name of the criteria

No.	Dimensions	Symbol
1	reduction of forgery of documents	C <sub>1</sub>
2	reduction of impersonation	C <sub>2</sub>
3	prevention of tax evasion	C <sub>3</sub>
4	prevention of administrative corruption	C <sub>4</sub>
5	prevention of a forged document	C <sub>5</sub>
6	prevention of counteraction	C <sub>6</sub>
7	reduction of paperwork	C <sub>7</sub>
8	prevention of speculation	C <sub>8</sub>

With each of the five criteria used to compare the value is the name of the values in shown table (3).

Table 3 Value Used in Research and Equivalent Name

Name	No effect	Low effect	Moderate effect	High effect	Very high effect
Value	00.0	1	2	3	4

Based on 6 Expert criteria used for review in accordance with the table below which shows the pair-wise comparison of each expert, In this matrix,  $x_{ij}$  is every expert and  $x_{ii} = (i = 1, 2, 3, \dots, n)$  is zero (zero main diagonal).

Table 4 Paired Comparisons of Criteria by Expert 1

Paired Comparisons of Criteria by Expert 1	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>	C <sub>6</sub>	C <sub>7</sub>	C <sub>8</sub>
C <sub>1</sub>	0.00	1.00	3.00	2.00	2.00	4.00	4.00	3.00
C <sub>2</sub>	1.00	0.00	2.00	1.00	1.00	3.00	4.00	3.00
C <sub>3</sub>	0.00	0.00	0.00	0.00	0.00	1.00	2.00	1.00
C <sub>4</sub>	0.00	0.00	2.00	0.00	1.00	2.00	3.00	2.00
C <sub>5</sub>	0.00	0.00	1.00	0.00	0.00	2.00	3.00	1.00
C <sub>6</sub>	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
C <sub>7</sub>	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
C <sub>8</sub>	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00

Table 5 Paired Comparisons of Criteria by Expert 2

Paired Comparisons of Criteria by Expert 2	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>	C <sub>6</sub>	C <sub>7</sub>	C <sub>8</sub>
C <sub>1</sub>	0.00	2.00	3.00	1.00	1.00	2.00	3.00	3.00
C <sub>2</sub>	1.00	0.00	2.00	0.00	1.00	4.00	4.00	2.00
C <sub>3</sub>	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
C <sub>4</sub>	1.00	1.00	2.00	0.00	1.00	3.00	4.00	1.00
C <sub>5</sub>	0.00	1.00	2.00	1.00	0.00	3.00	3.00	1.00
C <sub>6</sub>	0.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00
C <sub>7</sub>	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
C <sub>8</sub>	1.00	0.00	1.00	0.00	1.00	1.00	2.00	0.00

Table 6 Paired Comparisons of Criteria by Expert 3

Paired Comparisons of Criteria by Expert 3	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>	C <sub>6</sub>	C <sub>7</sub>	C <sub>8</sub>
C <sub>1</sub>	0.00	0.00	1.00	1.00	1.00	3.00	2.00	2.00
C <sub>2</sub>	0.00	0.00	2.00	1.00	1.00	4.00	3.00	4.00
C <sub>3</sub>	0.00	0.00	0.00	0.00	0.00	1.00	1.00	2.00
C <sub>4</sub>	1.00	2.00	2.00	0.00	1.00	3.00	4.00	2.00
C <sub>5</sub>	0.00	1.00	1.00	0.00	0.00	2.00	2.00	1.00
C <sub>6</sub>	0.00	0.00	1.00	1.00	1.00	0.00	2.00	0.00
C <sub>7</sub>	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
C <sub>8</sub>	1.00	1.00	2.00	0.00	0.00	2.00	2.00	0.00



Table 7 Paired Comparisons of Criteria by Expert 4

Paired Comparisons of Criteria by Expert 4	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>	C <sub>6</sub>	C <sub>7</sub>	C <sub>8</sub>
C <sub>1</sub>	0.00	2.00	2.00	1.00	2.00	4.00	4.00	4.00
C <sub>2</sub>	1.00	0.00	2.00	1.00	1.00	2.00	2.00	2.00
C <sub>3</sub>	0.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00
C <sub>4</sub>	0.00	1.00	1.00	0.00	0.00	4.00	3.00	1.00
C <sub>5</sub>	0.00	0.00	1.00	0.00	0.00	2.00	2.00	0.00
C <sub>6</sub>	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
C <sub>7</sub>	0.00	0.00	1.00	0.00	1.00	2.00	0.00	1.00
C <sub>8</sub>	0.00	1.00	1.00	1.00	1.00	2.00	2.00	0.00

Table 8 Paired Comparisons of Criteria by Expert 5

Paired Comparisons of Criteria by Expert 5	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>	C <sub>6</sub>	C <sub>7</sub>	C <sub>8</sub>
C <sub>1</sub>	0.00	0.00	1.00	1.00	1.00	1.00	2.00	1.00
C <sub>2</sub>	0.00	0.00	1.00	0.00	0.00	3.00	2.00	2.00
C <sub>3</sub>	1.00	0.00	0.00	0.00	1.00	2.00	1.00	1.00
C <sub>4</sub>	0.00	1.00	1.00	0.00	1.00	1.00	2.00	2.00
C <sub>5</sub>	1.00	1.00	2.00	1.00	0.00	3.00	2.00	2.00
C <sub>6</sub>	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
C <sub>7</sub>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C <sub>8</sub>	0.00	1.00	2.00	0.00	0.00	2.00	1.00	0.00

Table 9 paired comparisons of criteria by expert 6

Paired Comparisons of Criteria by Expert 6	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>	C <sub>6</sub>	C <sub>7</sub>	C <sub>8</sub>
C <sub>1</sub>	0.00	2.00	3.00	2.00	2.00	4.00	4.00	4.00
C <sub>2</sub>	0.00	0.00	2.00	2.00	2.00	4.00	4.00	3.00
C <sub>3</sub>	0.00	0.00	0.00	0.00	0.00	2.00	3.00	1.00
C <sub>4</sub>	1.00	1.00	2.00	0.00	1.00	3.00	4.00	3.00
C <sub>5</sub>	0.00	1.00	1.00	0.00	0.00	2.00	3.00	1.00
C <sub>6</sub>	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
C <sub>7</sub>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C <sub>8</sub>	0.00	0.00	0.00	0.00	0.00	1.00	2.00	0.00

For taking all the experts we mean the Formula (1) for them.

$$z = \frac{x^1 + x^2 + x^3 + \dots + x^p}{p} \quad \text{Formula (1)}$$



Where p, is number of experts and  $x^1, x^2, \dots, x^p$ , respectively comparison matrix paired Certified 1, Certified and Certified p is 2. Table (9) shows the average pairwise comparisons.

Table 10 The Average Opinion of all Experts

Average Opinion of all Experts	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>	C <sub>6</sub>	C <sub>7</sub>	C <sub>8</sub>
C <sub>1</sub>	0.00	1.17	2.17	1.33	1.50	3.00	3.17	2.83
C <sub>2</sub>	0.50	0.00	1.83	0.83	1.00	3.33	3.17	2.67
C <sub>3</sub>	0.17	0.17	0.00	0.17	0.33	1.33	1.50	1.17
C <sub>4</sub>	0.50	1.00	1.67	0.00	0.83	2.67	3.33	1.83
C <sub>5</sub>	0.17	0.67	1.33	0.33	0.00	2.33	2.50	1.00
C <sub>6</sub>	0.00	0.00	0.33	0.17	0.17	0.00	1.17	0.17
C <sub>7</sub>	0.00	0.00	0.50	0.00	0.17	0.83	0.00	0.17
C <sub>8</sub>	0.33	0.50	1.17	0.17	0.33	1.50	1.67	0.00

For normalizing the matrix derived from formulas (2) and (3), we use the table (10).

$$H_{ij} = \frac{z_{ij}}{r} \quad \text{Formula (2)}$$

Where r is as follow

$$r = \max_{1 \leq i \leq n} (\sum_{j=1}^n z_{ij}) \quad \text{Formula (3)}$$

Table 11 Normalized Matrix

Normalized	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>	C <sub>6</sub>	C <sub>7</sub>	C <sub>8</sub>
C <sub>1</sub>	0.00	0.08	0.14	0.09	0.10	0.20	0.21	0.19
C <sub>2</sub>	0.03	0.00	0.12	0.05	0.07	0.22	0.21	0.18
C <sub>3</sub>	0.01	0.01	0.00	0.01	0.02	0.09	0.10	0.08
C <sub>4</sub>	0.03	0.07	0.11	0.00	0.05	0.18	0.22	0.12
C <sub>5</sub>	0.01	0.04	0.09	0.02	0.00	0.15	0.16	0.07
C <sub>6</sub>	0.00	0.00	0.02	0.01	0.01	0.00	0.08	0.01
C <sub>7</sub>	0.00	0.00	0.03	0.00	0.01	0.05	0.00	0.01
C <sub>8</sub>	0.02	0.03	0.08	0.01	0.02	0.10	0.11	0.00

After the matrix, the matrix of fuzzy relations According to Formula (4) is obtained.

$$T = \lim_{k \rightarrow +\infty} (H^1 + H^2 + \dots + H^k) = H \times (I - H)^{-1} \quad \text{Formula (4)}$$

The formula I is the identity matrix. Table (12) shows the t matrix.

Table 12 Matrix of relations

Matrix	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>	C <sub>6</sub>	C <sub>7</sub>	C <sub>8</sub>
C <sub>1</sub>	0.02	0.10	0.22	0.11	0.13	0.33	0.35	0.25
C <sub>2</sub>	0.04	0.02	0.18	0.07	0.09	0.31	0.32	0.22
C <sub>3</sub>	0.01	0.02	0.02	0.02	0.03	0.12	0.14	0.09
C <sub>4</sub>	0.04	0.08	0.16	0.02	0.08	0.27	0.32	0.17
C <sub>5</sub>	0.02	0.05	0.12	0.03	0.02	0.21	0.23	0.10
C <sub>6</sub>	0.00	0.00	0.03	0.01	0.01	0.01	0.09	0.02
C <sub>7</sub>	0.00	0.00	0.04	0.00	0.01	0.06	0.01	0.02
C <sub>8</sub>	0.03	0.04	0.10	0.02	0.03	0.14	0.16	0.03

The next step is to get all the rows and columns of the matrix T. Whole rows and columns according to formulas (5) and (6).

$$(D)_{n \times 1} = [\sum_{j=1}^n T_{ij}]_{n \times 1} \quad \text{Formula (5)}$$

$$(R)_{1 \times n} = [\sum_{i=1}^n T_{ij}]_{1 \times n} \quad \text{Formula (6)}$$

The D and R are respectively matrix  $n \times 1$  and  $1 \times n$ .

Next, the Relationship between the Criteria ( $D_i - R_i$ ) is Determined. If  $D_i - R_i > 0$  is the Relevant Criterion is effective and if  $D_i - R_i < 0$  is the Relevant Criterion is Bonding. Table (13),  $D_i + R_i$  and  $D_i - R_i$ .

Table 13 The Effectiveness of The Criteria

Criteria	$D_i + R_i$	$D_i - R_i$	impact
reduction of forgery of documents	1.67	1.34	1
reduction of impersonation	1.58	0.95	2
prevention of tax evasion	1.33	-0.35	5
prevention of administrative corruption	1.41	0.86	3
prevention of a forged document	1.19	0.36	4
prevention of counteraction	1.64	-1.28	7
reduction of paperwork	1.76	-1.46	8
prevention of speculation	1.44	-0.42	6

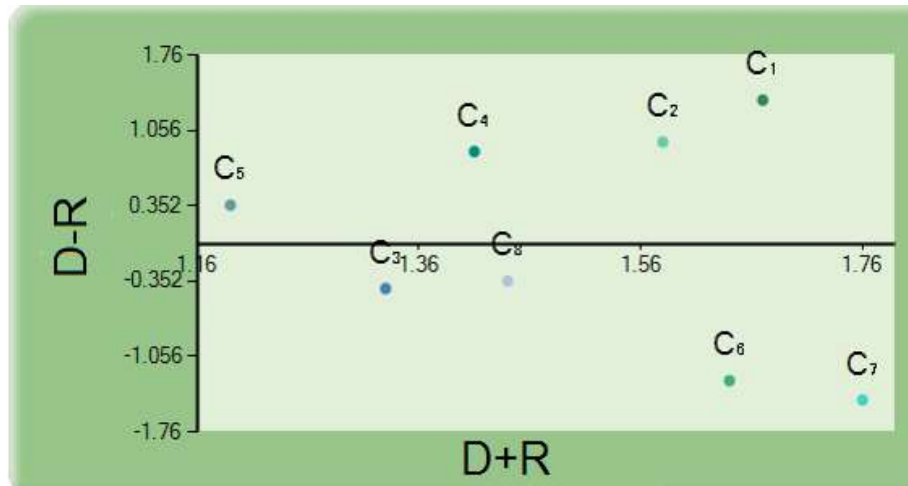


Figure 2 Relationships between Criteria

### Conclusion

Considering the results of the DEMATEL technique, it is found that the more positive the amount of (D-R) is, it is more effective and the more negative it is, the more influence on it. Hence, the most influential factor is reduction of forgery of documents and the factor that has been greatly affected is prevention of speculation. In other words, it can be said that forging documents is the factor that has the most influence on impersonation, tax evasion, administrative corruption, counteraction, paperwork, and speculation. It should be noted that regarding the most influential factors, those factors that have a larger (D + R) and positive (D-R) are more important. In the case of factors being greatly influenced, those factors that have larger (D + R) and smaller (D-R) are even more important. Here are the suggestions below:

- The document registration organization is suggested to prevent the continuation of the problems and the negative opinion of the people and the office heads to return to the traditional registration method with proper management and solving of major problems in the fastest possible time.

- On the basis of Articles 46 and 211 of the law of the fifth development plan, as well as Article 12 of the Law on the health of the administrative system of the Islamic Republic of Iran and Section B of Article 48 of the Law of the Fifth plan of Documentation and Property Registration Organization of the country, the notarial offices of the entire country are required to draw up the document through the electronic system mentioned from September 17, 2013. Considering that the Documentation and Property Registration Organization and notary public offices are among the organizations and institutions that manage the valuable information of governance and are more protective than other organizations and institutions, it is suggested that, while thoroughly reviewing all legal, technical, and social aspects of this process and the proper placement of the role of the Documentation and Property Registration Organization as the trustee of this project as well as the notary public offices as users of the process, the system should be deployed so that the least damage is on the necessary infrastructure in order to facilitate the

provision of services to individuals. This will not be possible as except in the light of partnership and continuous cooperation between the Documentation and Property Registration Organization as a trustee of the system and the notary public offices as the administrators and users of this system.

- Since the registration organization as the deputy of the judiciary in the field of social prevention should use all available tools and effective methods, it is recommended that the registration organization, as a legal person, take advantage of the most powerful public information media, namely, TV and radio, in order to further achieve its goals of excellence. It should also allocate some hours of the daily programs of television networks to inform news and build culture, and talk about the importance of electronic filing of documents in order to prevent the perpetrators of the references of these offices because illiteracy and lack of information about this issue affect the victimization.

- In the case of impersonation, the notary offices are suggested to enter the information of parties into the system at the time of referrals and before the office begins to draw up the document. By entering the national number and the date of birth of the interlocutors in the online registration system, they can check and control the characteristics of the parties to ensure lack of impersonation and that the parties are in life. By entering the postal code into the system, in addition to the above points, they can see the national card photo provided by the individual. It also helps to authenticate people and prevent them from using fake identity card or national counterfeit card, as well as forgery.

- Given that most birth certificates provided by people are old and most of the photos attached to birth certificates are old and people undergo major changes in the face over the years, such as hair loss in men or the removal of men's beard and mustache or beauty surgery or hair transplantation in women, all of these make authentication very difficult for the notary office head (which is very important), causing impersonation in some cases. There are also other cases such as identical twins that are very similar. According to the head of the notary offices in Mashhad, many times, one of the twins has transferred his twin's property and mortgages with the presentation of identification documents of him/her. Therefore, in order to protect the heads of the offices from human errors and to make the least mistakes in authentication, it is suggested to notary office to be equipped with intelligent and electronic authentication devices.

- Notary public offices throughout the city of Mashhad are suggested to be equipped with a Fingerprint system. Although there are doubts about the accuracy of these devices, the degree of error of the device is not enough to be ignored. The way this device works is that the person's personal information is achieved in the system with his fingertips and the person's identity is confirmed and if the fingerprint does not match the system's information, the notary will refuse to draw up the document and understands the forgery. Therefore, it is suggested that by equipping the offices with authentication devices or setting up its infrastructure, judicial records can be significantly reduced in the long run and fraudulent forgery of identity cards and national cards and imposition of additional costs on the community can be prevented.

- Considering that Iran ranks 15 among countries in the world with regard to the use of authentication technology through the cornea of the eye, it is recommended to produce this technology in Iran and use it in notary public offices. Researchers say that the error rate of authentication devices through cornea is less than that of fingerprint devices.

- Authorities are suggested to support the establishment of an online registration system in the notary public offices, since notary offices are required to receive value added tax from customers under this system. These legal requirements will prevent tax evasion. Also, due to this law, notary offices are obliged to inquire about the property and tax debt certificate of the seller at the time of regulating the fixed and immovable documents. With respect to the property inherited, they are also required to receive a certificate of form 19 of tax, and also at the time of car transfers (such as: pickup, minivans, or trucks), they are required to receive a tax deduction certificate. For ordinary riding cars, notary offices are required to receive asset transfer tax.

- Also, given that many problems with today's organizations are due to the lack of transparency in the administrative system, organizations need to be transparent and improve their administrative health. Trading is accelerated, the affairs of people in the notary offices will also be accelerated, and corruption will be prevented with online registration system. All notary offices are recommended to be equipped with this system, since it makes it easy for inspectors of general offices of registration to monitor notary offices and they can study the contents of the document through the system of the office at any time that inspectors want, which will undoubtedly create greater transparency in the work of the heads of offices and other people in the community.

- All notary offices are recommended to be equipped with this system in order to reduce the use of forged document, since prior to the mandatory use of online registration system, individuals with a power of attorney referred to the notary office for the conduct of their client's affairs, which, in most cases, was done getting the power of attorney from the office issuing it and making sure the document is correct, but sometimes people referred to notary office with forged documents, which is prevented using online document registration system. In this way, only the documents registered with the system can be logged in and the office with online system cannot issue the document in case that the power of attorney is fake or has not been registered before. With the deployment of an online registration system, fake proxy documents can be prevented.

- According to Article 5 of the bill about the registration mistakes and documents and property in conflict enacted in 1954, a deal in conflict is the second or subsequent deals on a property when a deal is made on a property and the same deal is made on the property with others. Deal in conflict has negative consequences and causes damage to individuals and society; therefore, the notary public offices are recommended to obtain a tracking code with the establishment of online registration system, in which after any type of transaction, real estate must obtain a tracking code that includes all records of the transfer of property.

- It is also recommended to oblige notary public offices to receive inquiries from the registration office at the time of drawing document for transfer of the property. The

inquiry record should contain the authenticated ownership of the owner, lack of property seizure, and property hypothecation, which is possible by establishing an online registration system. Because if someone has already passed the document to someone else, the system is not responsive to the primary owner (who now wants to make a deal in conflict), and the office will not be able to transfer the document.

- It is suggested that electronic document forgery can be prevented by persuading people and individuals to have electronic signatures and use coded words in dedicated systems, in which legal and business relations may be formed.

- Considering the various dangers and costs that the forging of security documents imposes on different parts of the government, coping with this crime is of great importance; it is suggested that to form and strengthen the National Anti-Counterfeiting Committees with the presence of representatives of the organizations responsible for preventing and combating counterfeiting, which was formed previously, in order to coordinate and organize the counterfeiting of Documents.

- Due to the dispersion and a great variety of different documents in the registry office and due to their different functions, it is suggested to rank various security documents in terms of type of operation, circulation, useful life, prospects and costs of production in the form of a law with a strong executive guarantee in the long run.

- Considering the development of new technologies and the efforts of different countries to provide the necessary measures for the production of multi-purpose smart cards, on the one hand, and the start-up and deployment of the necessary infrastructure for e-government in the country, on the other hand, it is suggested to put intelligent multi-purpose national cards on a long-term agenda of officials and custodians to be operationalized as soon as the infrastructure is completed.

- According to Article 90 of the Islamic Consultative Assembly, speculation is a complex crime that has many hands behind it and a decisive judicial response can break those hands. It is suggested to register national lands in the electronic registration system in order to shorten the hands of speculators from occupying national and personal land, because these fraudsters and speculators of state and private lands make financial abuse through persons who have influence and relationship in different organizations or by identifying the vacuum of law and sometimes exploiting forged documents. In spite of the officials' emphasis on combating speculation, we still see the establishment of multi-storey towers in the foothills of the city, so that fraudsters do not even cross the parks and wildlife, scattering the land and building villas and towers.

- Prior to online document registration system, the notary public offices drawn up their documents on securities issued by the registry office and also sent all the document information to the registry office in paper. Initially, the registration inquiry was drawn up on certain forms (which was printed by the registry office and, as it was said, was purchased by the notary offices) and handed over to the registration office by the representative of the office or the owner and, after a few days, the response was received manually. This entailed immense costs for the printing of papers for the government and



the public, and it was possible to make mistakes at the time of writing the inquiry or the response to the inquiry, or the contents of the inquiry could be changed by the clerk or owner himself until the inquiry reached the office, which itself had a lot of consequences.

- According to Patterson (1970), the information technology system leads to discipline and administrative regulation, and tasks are carried out on a regular basis. Therefore, it is suggested to prevent time waste and paperwork using the comprehensive information technology system.

- Online registration has completely prevented the occurrence of these cases. In the past, billions of Rials were spent on the printing of securities, and it was possible to forgery the issued papers, loose several securities in the event of overcrowding, never read the provisions of the sheets, deliberately remove papers from the file, but nowadays, paperwork has been prevented with the help of online registration system and all the affairs related to the transfer of documents are done electronically preventing all abovementioned problems.

- Considering that some of the affairs of the notary offices are still paper, like the current ones, it takes both time and money to register the documents. It is suggested to design these documents in small credit cards and sign electronically with the lowest possibility of forging.

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