

## **The impact of Social and economical Factor Risks on Remote Voting System - The Kuwaiti Case**

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### **ملخص**

يعتبر التصويت من خلال بيئة غير موثوق بها كالتصويت الإلكتروني عن طريق الانترنت موضوع محل شك وقابل للنقاش لسببين هما : أولا : من ناحية المخاطر الاجتماعية والاقتصادية التي تتمثل في التقسيم الاجتماعي التقني , ثانيا : الانتخابات الفرعية , وثالثا : التصويت العائلي . فاختلاف الدخول الاقتصادية للأسر في الكويت تلعب دورا بارزا في تحديد نسبة المشاركة في التصويت الإلكتروني فهناك أسر مقتدرة في شراء أجهزة الكمبيوتر المطلوبة بينما هناك أسر محدودة الدخل لا تستطيع القيام بذلك , وهذا ما قمنا بتوضيحه في التقسيم التقني لفئات المجتمع . أما السبب الثاني : فهو من الناحية التقنية والتي تتضمن الأمن المعلوماتي والثقة للنظام المستخدم بالانتخابات الإلكترونية من قبل جميع الأطراف في المجتمع ( الناخب , إدارة الانتخابات و الحكومة , السياسيين والمرشحين للانتخابات ) .

هذا ويركز البحث على الجوانب الاجتماعية والاقتصادية للنظام الإلكتروني والتي لا تقل بأهميتها عن الجوانب التقنية حيث إننا نعتقد أن عدم التركيز عليها عند تطبيق نظام التصويت الإلكتروني في الكويت سيسبب فشل تطبيق النظام.

### **1. Introduction**

Kuwait is a small democratic country located in the Middle East of the northeast Arabian Peninsula. Its population is approximately 1.3 million Kuwaiti citizens. Elections in Kuwait are held for the

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National Assembly for the interval of four years. The country is divided into five blocks or districts, and within each district each citizen (eligible voter) is able to vote for four candidates and the ten with the most votes in each district will be awarded a parliament seat. Currently Kuwait is using the paper voting system which is supervised by the government officials at a local polling stations.

Although, the government of Kuwait does not officially recognizes political parties, however, de facto political blocs exist and strongly can impact the decision of the voter. Voters who belongs to those factions rarely vote for candidates who do not belong to their groups. This leads to hard fought campaigns that seem to revolve around neighbourhood issues, pitting families and tribes against each other. Hence, allegation of vote buying is widespread<sup>1</sup>, and tribes and factions frequently (against the law) hold primaries in order to ensure that their members will focus their votes on a selected few candidates. This means that the social groups like family, and tribes has more importance than the individual, while similarities (even if false) have precedence over differences<sup>2</sup>

As depicted in several research papers, Internet voting [or I-voting ] can solve many problems to the voters. For instant, a person could vote from his/her own home or office rendering obstacles such as traffic, weather and working hours irrelevant. However, electronic voting is not problem free. A whole new set of risks and challenges is created by this new voting scenario that is based on the use of electronic voting system.<sup>3</sup>

In this paper we present our views with regard to the social factors that must be identified when implementing electronic voting system to the Kuwaiti organization of election. In section 2 we classify the types of voting process in a controlled environment and in an uncontrolled environment. In section 3 we present an overview of the security risks which includes not only technical but also social risks as well . In section 4 we point out the problems which exist in uncontrolled environment and try to relate them to Kuwaiti environment where we believe that there are many social factors that can prevent the electronic voting for being a correct vote. In section 5 we concludes with some concluding remarks.

## **2. Classification of Types of Voting**

The term Electronic Voting (or e-voting) is used both for voting through a designed voting machines in a controlled environment and for voting via the Internet, which could be accessed in controlled or uncontrolled environments.

With the diversity of voting now being implemented in many countries it is useful to classify the voting in two types: Voting in a controlled environment and voting in an uncontrolled environment.

### **2.1 Voting in controlled Environment**

Voting in a controlled environment is voting where the voter casts a vote in person and where election staff verifies that the vote is cast in secrecy with the prescribed identity checks, etc. The obvious example is voting in polling stations on Election Day. On Election Day the environment is fully controlled by election staff and observed by representatives of the candidates. Many countries allow for the presence of observers and media as well. Even external voting – i.e. voting outside the country (through Embassies) – may be organised in a controlled environment also.

### **2.2 Voting in an Uncontrolled Environment**

In an uncontrolled environment the voter is casting the vote by himself or herself without anybody controlling that the vote is cast in secrecy or without intimidation or pressure. The most common example is postal voting, but even voting over the Internet has started in some countries (like; Estonia). Voting in uncontrolled environments was originally an advantage to those who were unable to come to the polling stations in person either because they were abroad, hospitalised or in other ways not able to cast a vote in person on Election Day. However, some countries (such as Great Britain and Spain and some states in the USA) have opened for postal votes as an alternative to voting in a polling station that is open to any voter.<sup>4</sup> stated that Voting in an uncontrolled environment raises two major problems: There is a risk of impersonation and fraud where the vote is cast by other persons than the voter and without the person's

consent or knowledge, and the vote may not be cast in secrecy free from intimidation or undue influence. Personal keys are now being developed in such a way as to allow people to perform sensitive tasks via the Internet. e-government and bank transactions are done via the Internet in many countries, and even more sensitive communication will follow. However, so far

the keys to such transactions can be given to a third person who will make the transactions on another person's behalf.

### **3. SECURITY ISSUES**

The public must feel comfortable with the security, result and outcomes in order to trust the technology<sup>5</sup>. Many people are concerned about the *security of remote voting*<sup>6</sup>. Using personal computers in uncontrolled environment from home or work, it is never as secure as using the voting machines in supervised polling stations. Personal computers might be more vulnerable to hackers, denial of service attacks, viruses, or phantom Web sites which are used to divert voters<sup>7</sup>. If citizens do not trust that the elections they participate in are fair and that the votes are counted correctly, then they may not accept that the final votes represent their opinion. At polling stations the voting system could provide such a voter verifiable audit by printing a permanent paper record of each vote. In case of any doubts about the results of the election, there is then the possibility of a manual recount of these paper ballots<sup>8</sup>. However, voting via personal computers often do not have this facility, which makes recounting impossible. If we switch from e-voting in the polling station to Internet voting like voting from home, this becomes an even more serious problem, the paper trail is then impossible.

Yet, technical vulnerabilities are not the only threats to the security, integrity, and secrecy of Internet ballots. Social factors also play a very important role. Voting systems should guarantee a democratic election which is free, equal, transparent, and secret. However, voting in uncontrolled environment like I-voting cannot guarantee any of these criteria. This paper will give an overview of four nontechnical reasons why we think implementing a remote e-voting system adds a real challenge for the election organization in Kuwait.

#### **4. Social and Economical factor risks and challenges**

Casting your vote through the electronic voting (I-voting) is in their nature very different than voting through the traditional paper voting. For example, the human to human interaction of traditional system is substituted by a variety of hardware and software components. Therefore, implementing the new e-voting system in Kuwait will not be an easy task and it will pose a lot of technical and social challenges. To define the social factors<sup>9</sup>, defined Social factors as those factors which include small groups such as family, friend circles, social roles etc. Either we take his ideas from the marketing prospective or the political one, these groups exist and they have direct effect on person's behavior as we will explain later. In this section we will define different social factors (nontechnical factors) that has a direct effect on the voters before casting his/her vote. The perceived social impact can be summarized in the following key issues, which need to be taken into careful consideration, as beliefs often anticipate or even modify the way the Kuwaiti citizens are voting:

##### **4.1 Family voting**

The first social factor is Family voting which refers to the case when a family member votes on behalf of other family members. This situation is more likely to happen when a vote is not cast in controlled environment, which is a supervised place where citizens cast their vote in private. Thus, in the case of remote voting in an uncontrolled environment, such as internet voting, secret suffrage cannot be fully guaranteed. Kuwait is a family-oriented country where family values are very high. All family members have to obey the father and the mother of the family to show some kind of respect. In case of the electronic voting, this sometimes can be used in the wrong way, where the father or leader of the family might affect another family member's decision<sup>10</sup>.

conducted qualitative research on Kuwaiti citizens' attitudes toward women's political participation, according to this research both men and women participants agreed that Kuwaiti women's lack of political awareness translates into women voters being heavily influenced by their husbands, fathers or brothers. Participants also

stated, fathers traditionally decide how the voters in the family will cast their ballot, basing his decision on his family's interests. The participants also noted, that although most women vote as recommended by their fathers, more women would vote according to their own choices if they were more aware of where their own interests in the election lay, even if it contravened their husband's opinion<sup>11</sup>

#### **4.2 Diwaniya**

The second social factor that may well cause features of e-voting to influence voting preference is the degree of social interaction and discussion around political topics prior to voting<sup>12</sup>. called this process group consensualisation. Because discussion is likely to polarise in line with group norms and identities<sup>13</sup>. One of the important places in Kuwait that can

host this kind of social interactions and discussions is called Diwaniya.

Diwaniya in Kuwait is a place usually established by families and groups such as political or friends groups and it is used for regular social and political gathering. It is open for the public so any one can attend any diwaniya on its official day of gathering. citizens of Kuwait can attend those places to discuss various issues, political, social and family and meet new people. Attendees of Diwaniya engage in various discussions that could sometimes change their mindset and opinions and the amount of information they have on a certain issues, since they are socialized with different people that have diverse background and opinions<sup>14</sup>. According to NDI research, Participants asserted that male candidates visit diwanias regularly outside election time, making a name for themselves by participating and holding seminars<sup>15</sup>. In Fact Candidates running for the Kuwaiti parliament are using these places as campaign venue where they can affect the political opinions and voting decision of the diwaniya attendees<sup>16</sup>. stated that citizens are influenced mostly not by what they receive from the media, but by conversations, viewpoints, and feedback they acquire from their social networks.

Therefore, Diwanias in Kuwait can play an influential part in the voting preference due to the social interaction and discussions around political topics prior to voting. It also can have people vote for a

candidates for whom that they might otherwise have had no intention of voting.

### **4.3 Digital Divide**

The third factor is the Economical factor which is Digital divide where research have stated that internet voting has to deal with the existing digital divides within the society in which there is an upper class bias<sup>17</sup>.

The Digital Divide can happen in many different ways within the Kuwaiti society. There is a digital divide between those with and without computers, with and without internet access, with poor and wealthy citizens. Although, most of the Kuwaiti citizens have access to the internet, we cannot assume that every citizen has an equal access to e-voting system possibilities. There are people in Kuwait that cannot afford to have a computer and an internet connection because of their low income. Therefore the Digital Divide is a challenge to I-voting because of the wide differences of availability of I-access based on demographics such as age, income, education, region, occupation and ethnicity<sup>18</sup>.

Divides could also relate to skills required to install the software and hardware and all the technical jargon. Elderly people in Kuwait have no familiarity in using computers, this might lead to e-voting difficulties. Therefore government has to make it easier for some people to vote, but not for others. One suggestion is to provide both the e-voting system and the traditional paper system as an option.

### **4.4 Primaries**

Research shows that people's social identities have a very powerful impact on their perceptions, connections, and behaviour<sup>19</sup>.

In Kuwait tribes and factions frequently (against the law) hold primaries in order to ensure that their members will focus their votes on a select few candidates. When group members like tribes define themselves in terms of their collective identity they focus on the similarities between themselves and fellow in-group members with reference to experiences, needs, interests, or goals<sup>20</sup>.

In Kuwait tribal groups always hold pre-election primaries which are illegal to pre-select the candidates with the best chance of winning in real election. They always win because political parties are not allowed in Kuwait. Several citizens and candidate have disapproved primaries because it does not give a fair chance to the people who wants to run for election and do not belong to the tribes. The leader of the tribes usually called Shaik, also have a very influential part in deciding for the group (tribe) whom to vote for and sometimes for boycotting the election. Participants in the<sup>21</sup> research asserted that voters base their choice on the tribal leader decision, familial and religious affiliations of and on the benefits offered by candidates, rather than on a specific political agenda.

### **5-Conclusion**

When a country plan to implement a new e-voting system there are many factors that have to be taken into considerations. These factors are but not limited to technical, social, political and behavioral. During the system design process the technical and social factors should be treated equally in order to influence the functionality and usage of the computer-based system. Systems often meet their technical requirements, but are considered to be a failure because they do not deliver the expected support from the social side for the real work in the organization. This paper assess the impact of four social factors on an e-voting system when introduced to the Kuwaiti election, these factors are family voting, Digital Divide, Diwaniya, and Primaries. We believe that ignoring these four factors will lead to a system failure. When an e-voting system is introduced it is hoped that with identifying these social factors the election campaigns would connect more directly with the voter, deterring any corrupt practices and enabling campaigns based on ideologies rather than family and tribes loyalties.

This document does not aim to express an opinion for or against the introduction of e-voting; it is designed to provide assistance and alert to the election organization in Kuwait when considering introducing it.



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