National Culture And Its Impacts On Cyber Diplomacy

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Abstract

Diffusion of information and communication technologies is a global phenomenon. In spite of rapid globalization there are considerable differences between nations in terms of the adoption and usage of new technologies. Several studies exploring causal factors including national cultures of information and communication technology adoption have been carried out. The focus of this paper is slightly different from other studies in this area. Rather than concentrating on the individual information technology the cyber diplomacy is the focus. This research conducted an analysis of the impact national culture has on adoption of the cyber diplomacy and its components for 95 countries. The national cultural dimensions were identified using Hofstede's model of cultural differences. The research model and hypotheses were formed and tested using correlation and regression analysis. The findings indicate that worldwide cyber diplomacy adoption is related to national culture. The result has theoretical and practical implications.

Keywords:

National Culture; Cyber Diplomacy; Information Technology adoption; G. Hofstede

Introduction

In the last decade we have seen a rapid rate of Internet penetration worldwide. Although this Internet diffusion happened on a global scale there are significant differences between countries in terms of how far they went and how fast they have adopted new information and communication technology (labeled ICT) as was shown by Maitland & Bauer (2001). Since the adoption of a new technology varies between countries it is important to construct a composite measure of the country's overall readiness to adopt and use a new technology and also to measure factors that contribute to the adoption of ICT. Various factors influencing Internet adoption have been considered in several studies. It was confirmed that telecommunication infrastructure (Hargittai, 1999), socio-economic factors (Robinson & Crenshaw, 1999) and cultural values (Maitland & Bauer, 2001) have a significant influence on ICT adoption among countries.

A country's overall readiness to adopt, use and benefit from using ICT is called country's eReadiness. A knowledge of the factors which make a significant contribution to eReadiness and the country's position on the eReadiness scale would help the country's leaders to identify the strengths and weaknesses of the country's current position and to concentrate on the areas where improvement and further integration of ICT could be made (Bridges.org, 2001). Diplomacy is one of those parts, where governments are still doubtful in effectiveness of ICT implementation and improvement.

At first glance it might look as if diplomacy has not changed all that much due to the advent of IT, as if diplomacy were to resist change. To some extent this is true, since there are no doubts retarding factors, such as a slower generational change in comparison to the business sector but also the particular relevance of the temporal factor in diplomatic procedure. In diplomacy, probably more than in other professions, a fast decision is not necessarily the best decision. Most importantly, however, we should keep in mind that - again in diplomacy more than in other professions – human input, the human factor has considerable importance. Thus personal contacts, human expertise and experience, in-built controls and feedback mechanisms, characteristic for diplomatic procedures and not necessarily fast or highly efficient, will continue to exert influence over diplomacy making the re-engineering of diplomatic procedures a more subtle and complex exercise. Now we are at the point where we need to discuss a cyber diplomacy.

What is cyber diplomacy?

Diplomacy is the method—some might say the art—by which relations between nations are managed. It is the manner, as distinct from the content, of foreign policy.

"Cyber Diplomacy" is political, social, and economic interactions that are mediated through electronic means rather than face-to-face communication." [1] In the broad definition, cyber diplomacy signifies the integration of new ICTs, especially the internet, in diplomacy practices at all

[1] Alternatives: Turkish Journal of International Relations, Vol. 5, No.4, Winter 2006

levels in order to facilitate the achievement of diplomacy goals. Whereas, in its narrow definition, cyber diplomacy means the use of new ICTs, especially the internet, to perform the functions of diplomacy, i.e. presentation, information, negotiation, and communication.

The traditional functions of diplomacy have undergone a series of changes since the incorporation of ICTs in diplomatic practices. The US Institute of Peace relates "virtual diplomacy" [2] to the role of ICTs in the conduct of foreign affairs, particularly their effects on international conflict management and resolution[3]. In fact this definition fits with the specific task of this Institute focused on resolution of international conflicts.

Key elements of cyber diplomacy based on the use of the internet in the following fields:

- Information gathering;
- Communication and negotiation;
- Virtual embassies and conferences, and
- Rising of new diplomatic actors

Information Gathering

The access to information is always a crucial concern of diplomats, who have, for a long time, monopolized on gathering and providing information about international affairs and foreign countries. But since the early generation of ICTs, diplomats abroad have lost the monopoly on outside information. Today, if any FAM (Foreign Affairs Ministry) needs a resolution adopted by UN, or a legal document of any international organization, or any information about an international event, it does not have to ask its diplomatic mission concerned to look for such resolution, legal document or information, and send them to the headquarters of FAM, but they can be found early and quickly in the web site of international organization or country concerned. Thus, diplomats have overlooked gathering and transmitting information, however, they are gradually concerning themselves more with new high-level diplomatic tasks.

Communication and Negotiation

Internet grants to diplomats to be in continuous contact with their counterparts in other countries, and it facilitates online bilateral and multilateral negotiations between international actors (including NSAs as well). These online negotiations will undoubtedly help to resolve many mutual and collective disputes. This new form of negotiation by internet will certainly simplify classical bureaucratic procedures, and it will contribute to overreach some protocols do not adapt to new ICTs.

Ernst Sucharipa has summarized the main advantages of negotiating per internet in the following[4]:

- Concentration on content and substance, no"emotional noise";
- Clarity, lucidity of formulation, less misunderstandings;
- Facilitates comparison of texts proposed;
- Transparency, easy to maintain record of proposals made and revisions added;
- Time factor: each delegation can work according to its rhythm, time difference can be turned into advantage;
- Easy and reliable method of establishing the final text;
- More than two parties can participate;
- Cost efficient.

Virtual Embassy

Virtual embassy becomes a buzzword within academic circles that interested in the impact of new ICTs on diplomacy. Can this virtual embassy replace the resident ambassador? It is difficult to answer with a decisive response, in harmony with my vision that considers new ICTs as complementary tools of diplomacy. One of the great motivations of virtual embassy relates to its low cost when we compare it with the cost of resident embassy which is too high, and virtual embassy reduces human resources at minimum as well.

Today, the visa application has been filled out, in some embassies, online and perhaps the payment will be also soon by credit card. Virtual embassy may be located at host country or elsewhere, and perhaps it can be located in a hotel room as one researcher wrote[5], as several countries did in the course of Bosnia conflict.

Rising of New Diplomatic Actors

Classical diplomacy was characterized by two key features, the first is that nation-states were the predominant actor in international relations; the second is that FAMs were exclusive ministries that assumed the management of foreign affairs. This image of world politics has changed during the last decades. Today nation-states are not the only diplomatic actor on international scene, and FAMs and their agencies are not the exclusive representative of government at international level as well.

The concept cyber diplomacy is important because of the opportunities it creates for each country in terms of benefiting from eCommerce activities, openness to globalization, potential to strengthen its global representation.

The secondary focus in this paper is on the role that culture has in the adoption of ICT. Cultural differences between countries in general and particularly in relation to information technology adoption is a highly researched

[2] In this paper "virtual diplomacy" would mean "cyber diplomacy".

[3] See the page web of US Institute of Peace: www.usip.org/virtualdiplomacy/

[4] Ernst Sucharipa, "21st Century Diplomacy", available at: http://campus.diplomacy.edu/lms/pool/BD%20materials/Sucharipa.htm#_ftn1

[5] Gordon S. Smith, "Reinventing Diplomacy: A Virtual Necessity", Virtual Diplomacy (US Institute of Peace), Serie No.6 (February 2000). Available at site web: http://www.usip.org/virtualdiplomacy/publications/reports/gsmithISA99.html

subject. The concept of culture adopted and used in this paper is based on works of Dutch anthropologist Geert Hofstede who defines culture as "a system of collectively held values". The following authors identified cultural values as one of influential factors on adoption of ICT: Bagchi, Cerveny, Hart & Peterson (2003), Johns, Smith & Strand (2003), Maitland & Bauer (2001) and Sørnes, Stephens, Sætre, & Browning (2004).

The main objective of this research is to investigate the relationship between national culture and adoption of cyber diplomacy. More specifically the purpose of this research is to provide a theoretical framework for the impact of national culture on adoption of cyber diplomacy and to test whether the national cultural dimensions have significant impact on the adoption of cyber diplomacy. The data set for this paper includes the largest number of countries in comparison to data sets in other papers.

In the next section we review cyber diplomacy adoption framework and the relationship between national culture and ICTs, providing the theoretical foundation for our empirical analysis. Based on deduction from theory and previous empirical work the third section will provide the answer to the question, how does culture influence adoption of cyber diplomacy?

Cyber Diplomacy Adoption Framework

The dominant cultural framework that has received much attention from scholars (Van Everdingen and Waarts, 2003; Lee and Peterson, 2000) is that of Hofstede (1984, 2001). I use this framework in order to facilitate comparison with other studies. Hofstede's framework originally consisted of four cultural dimensions (Power Distance, Uncertainty Avoidance, Individualism and Masculinity), a fifth dimension was later included (Long-Term Orientation).

Research studies which considered the various factors having an impact on the ICT adoption confirmed that telecommunication infrastructure (Hargittai, 1999), socio-economic factors (Robinson & Crenshaw, 1999) and cultural values (Maitland & Bauer, 2001) contributed to the explanation of differences in Internet diffusion between countries. We would also expect that in a democratic political system the government will foster the design and development of various channels for providing their services to the citizens. Indeed, research has examined the impact of democracy, corruption and globalization on cyber diplomacy adoption and found that more democratic countries are higher ranked on the cyber diplomacy adoption list than the less democratic countries (Kovačić, 2005). As Bretschneider, Gant & Ahn (2003) suggested, the degree of cyber diplomacy adoption could be explained in terms of the perceived administrative benefit from adopting cyber diplomacy services, the political nature of online applications, the government's organizational capacity in adopting new information technology, and the diffusion effect of cyber diplomacy service technology.

National Culture and ICTs

The concept of culture is not uniquely defined in literature. As Sørnes, Stephens, Sætre & Browning (2004) pointed out over 400 definitions of culture have been identified. Fortunately, in most of these definitions a commonly held view is that the cultural environment influences and shapes the values shared by the members of the society. Hofstede (1981), whose four-dimensional cultural model was used in this paper, wrote that "... culture is the collective programming of the human mind that distinguishes the members of one human group from those of another. Culture in this sense, is a system of collectively held values" (p. 24). He emphasized that "in the center is a system of societal norms, consisting of the value systems (the mental programs) shared by most of the population" (p.24). According to him, culture is an "interactive aggregate of common characteristics", "a collective phenomenon" which "is learned, not inherited" (p. 24).

Though the Hofstede model of culture is the most well-known classification of culture it is not the only one used in literature. Chanchani & Theivanathampillai (2002) investigate and discusse alternative classification of culture to Hofstede's classification based on the works of Triandis, Trompenaars and Fiske. They have set up a framework for comparing alternative classifications, evaluating the sufficiency and adequacy of these classifications. One of their suggestions is to use a classification of culture based upon the research objective. The Hofstede model is recommended in the following case "... if the researcher wishes to use an instrument or has collated data then correlation with Hofstede's data may be considered" (p. 15). McSweeney (2002) also criticized Hofstede's model of national cultural differences. He focused his critique on the Hofstede research methodology arguing that the quality of evidence in the Hofstede model of national culture is poor and the set of assumptions are not justified. However, in spite of criticisms the Hofstede model of culture has been widely used in the literature in the last two decades. There have been also numerous studies on the relationship between national culture and the use and adoption of ICTs. The following authors: Bagchi, Cerveny, Hart & Peterson (2003), Johns, Smith & Strand (2003), Maitland & Bauer (2001), Robinson & Crenshaw (1999) and Veiga, Floyd & Dechant (2001) concluded that the significant variation in Internet diffusion, IT implementation and acceptance between countries could be attributed to national culture as described by Hofstede's cultural model. Sørnes, Stephens, Sætre & Browning (2004) provided an excellent overview of the literature and a list of relevant studies on how ICTs impact culture and how culture impacts on ICT practices.

Based on 116,000 questionnaires Hofstede (1980, 1983) collected data from 50 countries and 3 regions about the work-related value patterns of employees in IBM, a large multinational firm. By using data from one firm only Hofstede controlled for a number of industry and company variables so that he could focus on cultural differences. Using correlation and factor analysis he revealed four largely independent dimensions of differences between national value systems: (1) power distance (large vs. small),

(2) individualism vs. collectivism, (3) masculinity vs. femininity, and (4) uncertainty avoidance (strong vs. weak). Later Hofstede identified a fifth dimension, dealing with long versus short-term orientation, replying to those who criticized his cultural model to be biased toward Western culture.

The Power Distance dimension reflects the perception that members of society have about unequal distribution of power in institutions and organizations and the extent to which it is accepted in a society. People in countries where power distance is large accept a hierarchical order in which everybody has a place that needs no further justification. Countries with small power distance allow upward social mobility of its citizens and their participation in the process of decision making. One of the conditions for such citizen's participation would be the implementation of various communication technologies which would support and help this participation happen. Therefore it could be argued that a country with a larger power distance would have a negative attitude toward implementing and using ICTs.

The Individualism/Collectivism dimension describes the relationship between individuals and the group in a society. For the countries with low individualism, i.e. high collectivism, people consider the group as the main source of their identity. On the other hand, an individualistic culture would pay more attention to the performance of the individual. Time management would be important and any technology that could help individuals to perform more efficiently would be highly regarded and quickly accepted. Therefore it could be argued that the country with a strong individualistic culture would have a positive attitude toward implementing and using ICTs.

The Masculinity/Femininity dimension describes the achievement orientation in a society. When the preferences in society are for achievement, assertiveness, and material success then the country is ranked high on masculinity. On the other side, cultures that rank low on masculinity, i.e. high on femininity, prefer relationships, caring for the weak, and the quality of life. A high masculinity index indicates a culture that emphasizes masculine values and has very separate and rigid gender roles and expectations. Some authors, such as Bagchi, Cerveny, Hart & Peterson (2003) argued that "ITs promote more cooperation at work, better quality of life and these values are espoused in nations with low MF index" (p. 960). However, it could be argued equally well that in a country with high masculinity there would also be a positive attitude toward implementing ICTs if these technologies improve performance, increase the chance of success and support competition, which are all key factors of a masculine culture. In other words the masculinity/femininity dimension could have at least at the conceptual level a mixed impact on the ICTs.

The Uncertainty Avoidance dimension describes the degree to which members of a society feel uncomfortable with uncertainty and ambiguity, preferring structured over unstructured situations. Members of societies with strong uncertainty avoidance would tend to avoid or reduce the risk induced by the unknown, i.e. unstructured situation, while people from countries with weak uncertainty avoidance could be described as 'risk takers'. It could be expected that countries with strong uncertainty avoidance would be slow in the adoption and use of new ICTs, while the countries on the opposite end of this scale would be leaders in implementing new ICTs and willing to take the risk of failure. Therefore it could be argued that the country with a strong uncertainty avoidance culture would have a negative attitude toward implementing and using ICTs.

All four dimensions of the Hofstede cultural model were included in the later empirical analysis. As statisticians say 'let the data speak for itself'. However, in the literature not all four dimensions were considered to be relevant for research on the impact of national culture on the ICTs adoption. For example in Maitland & Bauer (2001) only uncertainty avoidance dimension from the Hofstede model has been included. However, they have added two other variables which might be considered as cultural variables: gender equality and English language. Also, Johns, Smith & Strand (2003) included the individualism/collectivism and uncertainty avoidance dimensions only. They felt that achievement orientation (masculinity/femininity dimension) has a mixed impact on the use of technology. The same conclusion was drawn for power distance dimension and its impact on the use of technology.

Table 1 – Countries with highest and lowest Power Distance

Power Distance	
Max	**Min**
Slovakia 107	Austria 11
Malaysia 104	Israel 13
Iraq 95	Denmark 18

Table 2- Countries with highest and lowest Individualism

Individualism	
Max	**Min**
US 91	Guatemala 6
Australia 90	Ecuador 8
UK 89	Panama 11

Table 3- Countries with highest and lowest Masculinity

Masculinity	
Max	**Min**
Slovakia 110	Sweden 5
Japan 95	Norway 8
Hungary 88	Iceland 10

Table 4- Countries with highest and lowest Uncertainty Avoidance

Uncertainty Avoidance	
Max	Min
Greece 112	Singapore 8
Portugal 104	Jamaica 13
Guatemala 101	Denmark 23

To illustrate the four Hofstede cultural dimension values, three countries were selected from the list of all countries, those with extreme values (maximum and minimum) on each dimension and their scores were presented in Tables 1-4. For example, Slovakia scores 110 on masculinity and Sweden 5 reflecting the fact that Slovakia is a 'masculine' society where men are tough and concerned with material success, whereas women are more tender and interested in quality of life. On the other side of the masculinity/femininity scale Sweden is a 'feminine' society where both men and women are equally concerned with quality of life.

How does Culture Influence Cyber Diplomacy Adoption?

Figure 1 describes the model of influence that national culture has on cyber diplomacy adoption. The arrow in the cultural environment block illustrates the assumption that national culture affects society's basic values. People of the country are using these basic values as a foundation to build and shape the whole legal environment and a legal system with its three constitutive components: legislature, executive and judiciary. Then the legal environment and the legal system influences whether and how the government will use the new ICTs to support its internal and external activities. External to this model are socio-economic, technological and other factors which may influence cyber diplomacy adoption.

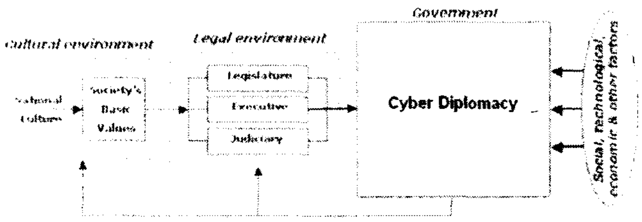

Figure 1 – A model of impact of national culture on Cyber Diplomacy adoption.

Though in his conceptualization Hofstede treated national culture as systematically causal, we can argue along the same line with Sørnes, Stephens, Sætre & Browning (2004) that "the relationship between organizational cultures and ICTs is not simply causal. Either one can cause changes in the other, because technology is part of culture and vice versa." In other words, there is a reflexive and dynamic relationship between national culture and ICTs rather than causal. Therefore, arrows, i.e. feedback links from Government block to legal and cultural environment blocks in Figure 1 have been added to take into account the impact that Government may have on the national culture and legal system. However these feedback links were not analyzed further for the methodological reasons explained later.
Based on the model in Figure 1, the above discussion of Hofstede's four cultural dimensions and the attitude that the country and its government might have toward using ICTs the following research hypotheses are offered:

Hypothesis H1: The government of a country with a larger power distance would have a negative attitude toward increasing the level of cyber diplomacy adoption
Hypothesis H2: The government of a country with a strong individualistic culture would have a positive attitude toward increasing the level of cyber diplomacy adoption
Hypothesis H3: The government of a country with a high/low masculine culture would have a positive attitude toward increasing the level of cyber diplomacy adoption
Hypothesis H4: The government of a country with a strong uncertainty avoidance culture would have a negative attitude toward increasing the level of cyber diplomacy adoption

Data and Methodology

Data for this paper was collected from three different sources and was available for 95 countries. While the data for cyber diplomacy adoption and GDP per capita were available for 190 countries, the major constraint came from a database containing cultural dimensions scores (Hofstede, 2004), i.e. data for only 95 countries was available. Generally, one of the main difficulties is a lack of data which would cover most of the countries around the world and would be available for all indicators to be included in analysis.
The reason for including GDP per capita in an analysis is explained by Hofstede (1980). He suggested including economic variables such as GDP per capita when examining the effect of national culture. When the effect of others hard variables (economic variables, for example) are significant, then the cultural variables are redundant. If the cultural variables are still significant in spite of included economic variables, then the effect of culture on observed phenomenon, i.e. cyber diplomacy adoption and its components could be confirmed.

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