Democracy Functions of Information Technology

Gunnar Lidén
Department of Business Administration, Informatics, Economics and Statistics
Örebro University, SE-701 82 Örebro, Sweden
Tel: +46 19 30 34 37 Fax: +46 19 33 25 46
E-mail: gunnar.liden@esi.oru.se

Anders Avdic
Department of Business Administration, Informatics, Economics and Statistics
Örebro University, SE-701 82 Örebro, Sweden
Tel: +46 19 30 31 20 Fax: +46 19 33 25 46
E-mail: anders.avdic@esi.oru.se

Abstract

Information Technology, IT, may play an important part in any community as a supporting tool in the democratic process. The conditions for that to happen are primarily a genuine wish of the community members to take democratic action, having access to the technology and the skills to use it.

The purpose of this paper is to establish the “Democratic Functions of IT” in what we call “The Swedish Democratic Model”. The model describes democracy, in its perfect state, as a political governing based on Citizen control, State governed by Law and Ability to Carry out Political Decisions. In order to achieve this purpose we first identify the concepts of democracy referring to literature on democracy applying to “The Swedish Democracy Model”.

With these concepts in mind, we then identify the Concepts of democracy of information technology by referring to literature describing various aspects of IT. The inventory of concepts had to be extensive in order to avoid a bias of perspective.

We have thus made a thorough survey of the concepts of democracy and information technology to find the necessary number of aspects.

The Democracy functions of IT have been defined as the various ways of how IT may support the individual and the various social communities in “The Swedish Democracy Model”.

By the individual we mean the citizen as a private person acting on his own or in different social networks. We define social communities as organisations and public administrations at a local or central level.

Seven functions have been identified:
- Support for communication
- Support for human networks
- Support for efficiency
- Support for political decisions
- Support for authority decisions
- Support for community service
- Support for public insight.

Our conclusion is that an IT system containing these functions has a great potential to support the democratic process in any community, regardless the political course of its government.

1. Introduction

In a country, ruled by democratic principals, the citizens have equal rights and possibilities to affect their daily life by decisions of their own and by contact with influential political representatives, who make important decisions common for the whole society.

The representatives are elected by the citizens on rules that assures a jurisdictionally correct procedure.

Though democratic political parties and other democratic organisations differ in their opinion on how to achieve the goal of Democracy, we are convinced that they have a genuine interest in doing so.

We regard Democracy in its perfect state as a political government based on Citizen control, State governed by Law and Ability to Carry out Political Decisions. [11].

There are several ways of using IT in a democratic process, one of which e-voting has achieved the greatest interest. [4]. Voting is an important and spectacular act in the democratic process, but even so it represents a relatively limited part if we take all aspects of democracy in consideration.

Is e-voting god or bad for democracy? Will a political decision gap be created between those who have access to IT and those who have not?

Citizen control is basically connected to the opinion that all citizens have equal rights regarding their importance, their participation in the creation of public opinion and the decision making process, their resources in aspects of economics, organisation, knowledge, competence, self-confidence and their contacts with influential people [8].

It means that equal citizens participate in a dialog and make decisions on topics they have brought to the agenda themselves [1].

State governed by law means that the citizens have fundamental constitutional rights. The public government satisfies the demand of law and order and the power of the public government is organized according to the principal of “sharing the power”, which means that some public organisations have the mission to control and value other public organisations.

Ability to carry out political decisions is essential in order to distribute to the citizens the benefits they are entitled to.
In this context, it is important to state that IT in itself has no power or intention of its own. Human intention and activity is necessary to make IT useful. In that aspect it is obvious that access to IT in no way guarantees that citizens automatically will take an interest in community matters. The individual must have a genuine interest of his own to do so. It remains to be seen that IT in itself may create such an interest.

The possibilities of IT to support the democratic process are thus dependent on the conditions that the citizens have a desire to participate in the democratic process, access to the technology and the skills to use it.

In this paper, we concentrate on the possibilities of IT in the democratic process regardless of the conditions mentioned above. Our ambition is also to avoid bias from our own political point of view and to avoid promoting ideas that any political party may have.

2. The object

The purpose of this paper is to describe the democracy functions of Information Technology. The general idea is to identify vital concepts in descriptions of democracy, which may be influenced by certain functions of IT.

These functions will be called “Democracy functions of IT”.

3. Methods

In order to achieve our purpose we have first identified the concepts of democracy referring to literature on democracy applying to a democracy model that we call “The Swedish Democracy Model”.

With these concepts and a definition of Information Technology in mind, we have identified the concepts of democracy of information technology.

Analysis has been carried out by applying analytical induction [2], [5], where the following three phases have been conducted:

1) Generation of key concepts. a) planning, b) data collection of and c) analysis.

These phases have been carried out twice. First with “democracy” as the common factor and after that with “Information Technology” in mind.

2) Relating key concepts. After the concepts have been generated, they have been related according to certain criteria.

3.1. Generation of key concepts

Democracy a). Planning. The planning phase has included inventory of sources, selection of sources and choice of analysis. The inventory of component concepts has an aim to be vast in order to avoid a bias of perspective. Our basis has been a report from the association of Swedish Municipalities [14].

Democracy b). Data collection. The reference list of the report mentioned above has been reviewed in order to find references containing key concepts. While reading the sources, key concepts have been chosen. The criterion of choice was that the concept should be related to democracy. This made the candidates a vast number of concepts. Actually we found more than 200 concepts. Examples of (randomly) chosen concepts are: political majority, information, referendum, budget.

Democracy c). Analysis. The material has been categorised according to “The Swedish Model” described in section one.

Information Technology a). Planning. Here we established a definition of Information Technology by applying to the definition formulated by the Swedish governments council of Information Technology. The definition was together with the key concepts of democracy the criterion of data collection.

Information Technology b). Data Collection. Key concepts of Information Technology were chosen from established references that matched the definition. These references were chosen from course literature and dictionaries. 23 concepts were generated. Examples of (randomly) chosen concepts are: decision, dialogue, information, and increased availability.

Information Technology c). Analysis. The generated concepts were categorised according to how they were related to each other.

3.2. Relating key concepts

When both groups of concepts were generated and categorised, the categories were related to each other according to “The Swedish Model”.

4. Theory and findings

Several authors have described the possibilities of IT in the democratic process. Two examples shows the general trend in doing so.

In a survey prior to the research program IT och Demokrati (IT and Democracy)[4] Åström mentions three possibilities that applies: Information, Discussion and Decision.

He also mentions that IT has the possibility to contribute to Democratic efficiency by supporting insight from the citizens and to establish new social networks.


In the field of “New forms for Citizen Participation” he mentions some examples of applications such as: Online Politicians, Expert Panels Online and Electronic Voting.

By regarding Democracy as a political government based on Citizen control, State governed by Law and Ability to Carry out Political Decisions we mean that democracy is not only a matter of open discussion participation, but equally important is what comes out of the discussions.
In a democracy, you must be able to make decisions according to the outcome of a discussion and then make it happen in reality. Thus we want to go further in the line of exploring which functions of IT support these three parts.

4.1. Concepts of democracy – the general idea

In this section we report on some of the literature used as a source to find Key concepts of Democracy. Excerptions from the literature are given as example and examples of Key concepts are enumerated in relation to each part.

We find it necessary to stress that in this paper neither the number of sources or Key concepts mentioned are the complete list.

The report *Demokrati och makt i Sverige*( Democracy and Power in Sweden) [8], links the “Swedish ideal of Democracy” to the fundamentals of equality of the citizens, their participation in the process of making decisions upon community matters and creation of public opinion as well as a uniform distribution of resources according to economics, organisation, knowledge and competence, self confidence and contact with influential people.

The Key concepts of that report are: equality of the citizens, participation, equality of resources and useful contacts.

The report *Demokrati som dialog* (Democracy as a dialog) [11], states that “We want the government to be as democratic as possible, Government of the citizens means that the citizens govern themselves by free and equal conditions.

The Government as well is supposed to correspond to them demands of a Community governed by law and be characteristic of Ability to carry out political decisions”.

A large number of Key concepts derives from this report. Some examples are: equal conditions, deliberation, open discussion participation, democratic decisions, common matters, representatives of political parties, organisation, civil duties, freedom with responsibility, law and order, legislation, equality of legal rights, human integrity, power of action, control of economic resources, power to carry through the decisions and control of realization.

Åström, [14], states that none of the two doctrines exists in reality, but are theoretical ideas. “The real democracy” has to be analysed from both views. As examples he mentions Premfor’s thoughts that originates from Benjamin Barber, 1997, on fast, thin and strong Democracy [9], [1].

Some examples of key concepts from the analysis are: Democracy with elected representatives, rule your daily life, public opinion, public polls, term of office, insight, elections, open discussion participation, dialog, common matters, more time and more trust.

Nielsen stresses the sense of solidarity between the members of a community. “Those who have a strong feeling of sympathy with the other citizens, show a considerably stronger confidence in the political system”.

Key concepts are sense of solidarity and solidarity. Putnam, [10] describes how an interaction between citizens contributes to a sense of community and stronger solidarity in a community, which is decisive of vital democracy. An important conclusion is that all kinds of associations and unions have a strong impact in these matters. Putnam means, that this is the foundation of the “good discussion”.

Some Key concepts are: interaction between citizens, sense of community, vital democracy, associations and unions.

Citizen commitment might show as two political identities described by Montin, *Vardagsmakaren och Brobyggaren* [6].

“Vardagsmakaren”, Maker of the Daily Life, is a person who is active in “the small democracy” at a very local level as a member of the school committee or a local union. His actions are not regarded as being of a political kind, but more of finding practical solutions to problems in his and the nearest community world.

“Brobyggaren”, The Bridge builder, is also primarily active like Maker of the Daily Life, but he is also active in “the big democracy” as a member of a political party. By activities in different connections he creates links between different institutions and organisations.

Some examples of Key concepts from this area are: The small democracy, non political party democracy, practical problem solving, benefits of the small local community, democratic ways of acting and decision making, the big democracy, creation of links, and local area democracy.

4.2 Concepts of democracy – organizing the output

Strandberg, 1998, states that you may identify three connected local community ideologies; ideology of Service Democracy, Citizens Democracy and Democracy of common matters.

Service Democracy implies that social service and social rights are equally distributed in the political state and the local community. The organisation of the local community has to be a forceful administra-tion that is able to effect a national political program of reforms.
Citizens Democracy as a local community ideology means “the free individuals organisation to carry through common tasks”. The citizens of the local community are primarily political persons, and the administration of the local community should be organized in a way that values of the citizens are promoted.

Democracy of common matters implies that the local community should be organized in a way that a locally visible and founded social solidarity is supported. The local community is regarded as a spontaneously and historically developed social community. It is a union built on the need and natural motives of human beings to gather themselves in collectives.

Some examples of Key concepts are: social service, social rights, forceful local administration, central political government, common tasks, values of citizenship, political function, democratic function, influence of citizens in the local community, independent local communities, locally founded social solidarity and a need to act as a collective.

Montin, [6] describes the “Big Democracy” and the “Small Democracy” which he means are terms that summarize on one hand the local representative democracy as well as representative political institutions at a higher level and on the other hand different local Democratic organi-sations parallel to the institutions.

They have both a functional and a territorial significance. In a functional sense, the Small Democracy concerns for example an institution like a school. In a territorial sense it concerns Democracy and politics in the local community.

Some Key concepts from this description are: local representative democracy, local administration and democracy and politics in the local community.

Montin [6] summarizes one view on Democracy in the concept “Democracy in Swedish”. The starting points are “Free formation of opinion” and “The realization of the will of the people”.

In “Democracy in Swedish” the view on participation from the citizens is mainly “realistic”, which means that all of the citizens can not participate and maybe they even should not. Political parties and organisations should represent the citizens as a whole or special groups of citizens. “Free formation of opinion and “The realization of the will of the people” are fundamental values.

The elected representatives have a double part in the democratic process. The representative who listens and bring up the wishes from the citizens and the decision maker who make priorities among different matters.

It is the decision making in terms of balance and priorities that is the heart of the process of the representative democratic process and separates it from the open market as one example.

Some Key concepts are: Free formation of opinion, The realization of the will of the people and balancing for the best of the community.

The model of local citizen government may be described as two streams [6]. The first, “Politics-in” consists of formulating, composing, balancing and evaluation of ideas which are to be ruling the direction and extent of the local government.

The influence from the citizens on the forming of politics is expected to take place in representative ways. The most important actors in this stream are the political parties. They are supposed to bring up problems, wants and needs from the citizens in a Democratic process which ends in common goals according to the general interests of the community.

Examples of Key concepts are: Politics-in, representative democracy, common goals, balance and priorities.

The other stream, “Politics-out” consists of executive institutions like boards, committees and administrations that are responsible for the execution of the decisions made by the representatives. The political government is expected to function according to a model that is built on an administration with actions based on rational goals.

As community members we act in different rolls according to this model. In our roll as citizens and political persons we participate in elections, in the political party organisation and contact our representatives to affect the community politics as a whole. In the roll as users or customers we utilize the community services. According to this model the interests of the users has to be subordinate to representative democracy.

Some examples of Key concepts are: Politics-out, boards, committees, political responsibility, users, clients, customers and influence on community service.

4.3 Democratic concepts of IT

As a starting point we use the definition of IT originating from the Swedish IT-commission: “Information Technology is a wide concept used to describe techniques to collect, transfer, store, work over and present sound, pictures and text in large quantities independent of distance. IT is a combination of computers and telecommunication, a marriage between the microprocessor and the telephone”[13].

In this sector we mention some of the sources used to describe the most common ways of using computers. The descriptions are mainly related to the technical functionality of IT and are restricted to functions that have possibilities to be important in a democracy connection. In addition to the functions we make an analysis of information security and the personal integrity concerning the use of computers.

With the former identified democratic concepts in mind, we now identify democratic concepts of IT. Examples of Key concepts are mentioned at the end of each description.

The personal computer as a tool for every man and woman is described by Windh [15]. He relates the history of computers beginning with the mathematic machines of the fourties. As the techniques developed fast, the computers became cheaper and better. This progress is of
vital importance to the future as it makes computer techniques common to the public and widely spread in different sectors and trades.

The personal computer has thus become a tool used by people in several occupations. Administrative activities have become more efficient to the individual and to the organizations where computers are used.

The functions of personal computers increase the efficiency of the administration by simplifying to get information, to make new information in writing, to work at old information, to make and work upon statistics, to make economic calculations, to store information, to search for information and to present information.

The Key democratic concept is efficiency of the administration in the political area, for example in political party organisations, local unions, users committees and in public administration at different levels.

Personal computers may be connected to each other in forming technical networks. The computer becomes thus a way to the user to access information and applications from other computers and users. The possibility of communication is widely increased in comparison to meetings person to person, telephone calls or ordinary postal service.

The Key democratic concept is to create human networks. It makes it possible to give and gather information and to establish a dialog.

The Internet is the largest network and it grows incessantly. Some conditions must be fulfilled for a person to get access to the Internet and services at hand: A contract with an Internet provider, a browser installed on your computer, an e-mail address and an application that supports chat.

The Key democratic concepts are: To present information, to get information, to send information, dialog and discussions.

A website in its simplest shape has the function of one-way communication. Someone, a person or an organisation, wants to present itself and distribute information. By using forms, e-mail addresses and links to discussion groups, the visitor to the site is able to create a two way communication with the owner of the site and other persons.

The Key democratic concepts are to distribute information and to create communication.

The Internet has the possibility of interactivity. The political government may find out the will of the citizens by public polls or by voting electronically. The polls may be regarded as advisory or decisive.

By a form on a website, a person may contact an organisation to get information that is of special interest. On condition that the organisation provides the information it is a possibility to insight. E-mail, chat and discussion groups are other possibilities to communicate and get insight.

The democratic Key concepts are: Public polls, referendum, bases for decisions, decisions, insight and dialog.

Electronic commerce is a phenomenon that primarily have no connection to democracy. However, the efficiency of a public organisation or a company affects democracy in view of controlling resources.

The democratic Key concept is efficient use of resources.

Security of information is a matter of great importance in the use of computers and has a strong connection to democracy. Companies, authorities and individuals have a strong interest in both distributing and protecting information. It means that information in some parts must be easy accessible and in other parts inaccessible to the public. This condition may create problems, especially when a computer is part of a network. Every organisation and individual must be aware of the vulnerability of their information system and be conscious of the protection needed.

The democratic Key concepts of security are: Reliable information, maintaining secrecy and maintaining individual integrity.

Legislation relating to information systems is not in itself a IT-function, but as it has a great importance regarding the influence on democracy by IT.

“The Law on personal data stored on computer medias such as a hard drive or a floppy disc, originates from the year of 1973. In1998 it was replaced by “Personuppgiftslagen”, having mainly the same purpose, namely to maintain integrity of the individual person [3].

The democratic Key concept is: To maintain the integrity of the individual.

5. Democracy functions of IT

We have chosen to make categories of the Democratic concepts of IT with the “The Swedish Democratic Model” in mind. The fundamentals of the model are: Government of the citizens, Ability to Carry out Political Decisions and Community governed by law. The categories are called “Democratic functions of IT”.

It is important to state once more that IT in itself has no power or intention of it’s own.

Human intention and activity is necessary to make IT useful. Democracy functions of IT are thus only possibilities or tools that requires such intentions and activities to become operational.

Government of the citizens needs an exchange of information and discussion prior to the necessary decisions. A communication between the citizens and the political institutions must thus take place. As shown earlier, IT has great possibilities as a tool for communication.

To support communication will, in view of informing and exchanging information be the first suitable category in the context of Democracy as a dialog when Government of the citizens is the issue.
To support human networks is the second category as Government of the citizens presumes communication between individuals.

Ability to Carry out Political Decisions relies on the base of efficiency in the context of well founded decisions, efficiency in the administration and efficient use of resources. The political decisions may be supported by public polls. As shown, IT has a great potential in both areas.

To contribute to efficiency is our first category and To support political decisions is the second category in this context.

State governed by Law implies that the citizens are treated equally when the benefits of the state is concerned. Their integrity is to be maintained and the decisions of the public administration must be founded on reliable information. The citizens have access to information that precedes important political decisions. IT has a potential to store reliable information. Information security at a high level is vital to maintain reliability of data and integrity of the citizen.

To support authority decisions, To support community service and To support public insight are the categories in the context of State governed by Law.

6. Conclusions

We have described the process of finding Key concepts of Democracy and IT. We have used these concepts to establish seven Democratic functions of IT; Support for communication, Support for human networks, Support for efficiency, Support for political decisions, Support for authority decisions, Support for community service and Support for public insight.

A summary of the categorization of Democracy functions in the context of the “Swedish Democratic model, will appear like this:

1. Government of the citizens
   a) Support for communication
      To inform
      To exchange information
   b) Support for human networks
2. Ability to Carry out Political Decisions
   a) Contribute to efficiency
      Efficient administration
      Efficient use of recourses
      Well-founded decisions
   b) Support for political decisions
      Decisive referendum
      Public polls
      Advisory referendum
3. State governed by Law
   a) Support for authority decisions
      Store reliable information
      Maintain the personal integrity
   b) Support for community service
      Increase the accessibility
   c) Support for public insight

7. Discussions

As we have shown, IT may have a wide impact on the democratic process. The functions we have found, are likely to effect important parts of Democracy and to give the citizens possibilities to take part in the governing of their community and state. The functions may also have the effect of giving them faith in the community administration, as the efficiency and the insight increase.

It is possible to create IT-systems that meet the demands of the seven functions. Such systems are likely to increase the citizens trust in Democracy and contribute to its development. It also will be possible to analyse any existing system according to the functions and find out if they are present or not.

By the theoretical basis of the report we have designed a method that makes it possible to analyse such a system and to assess its possibilities to effect the development of the democratic process.

8. References


Additional references:


