Munukka Katriina

BRIDGING THE DIGITAL DIVIDE?
DEVELOPMENT OF INFORMATION SOCIETY IN NAMIBIA
-CONCEPTIONS OF THE LOCAL ACTORS

University of Tampere
International School of Social Sciences
Department of Sociology and Social Psychology
Master’s Programme on Information Society
Sociology
Master’s Thesis
May 2005
Information society is a current topic in nearly every country’s development strategies and there are several initiatives all over to enhance development of the information systems to support countries’ economical and social development. Also the developing countries in the sub-Saharan Africa are within the process. However, there are many challenges for developing countries to overcome to achieve the level of information society where the systems really benefit their citizens. Furthermore, there are number of problems within the implementation of information systems in the third world countries since the models originally derive from the western world and are improved in different circumstances. The purpose of this thesis was to find out how the local actors in Namibia experience the development of information society and how do they understand the model of information society to fit in the Namibian context.

As a theoretical point of view in this thesis there is the power relations between the western world and developing countries. As main theories there are introduced some views of H. Schiller and M. Castells. In addition, the common discussion about digital divide is an important point of view.

There were done ten interviews done for this study. The interviewees were people who are working in the ministries and other high-level organizations. The interviews were thematic ones and the data was analyzed by using classification technique.

The results indicate that there are many constraints for the development of information society in Namibia; there is lack of human resources, lack of technical infrastructure and lack of investments. The local actors seem to think that other infrastructure than ICT should be in place before the more serious investments on ICT can be done. Mainly, people did not maintain ICT within the top developmental needs. A significant result there is also that people seem to lack relevant context in which to utilize ICT based systems. This also hinders the development of information society. In addition, a significant result from the theoretical point of view is that the local actors did not consider imported systems as a problematic issue. They mainly maintained that any development from the western world is positive impact.

As a conclusion, the local actors were mostly skeptical about the development of information society in Namibia and it could be maintained that since all the challenges, the development will be rather slow in the future as well. In addition, criticism towards imported systems is essential for the sustainability of information society development.

Keywords: information society, ICT, digital divide, development co-operation, Namibia, e-governance
### ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
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<tr>
<td>ALAN</td>
<td>Association of Local Authorities in Namibia</td>
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<td>CABLE</td>
<td>Capacity Building for Regional and Local Authorities</td>
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<td>DAI</td>
<td>Digital Access Index</td>
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<td>e-</td>
<td>Electronic</td>
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<td>ECA</td>
<td>Economic Commission for Africa</td>
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<td>EU</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>ICT</td>
<td>Information and communication technology</td>
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<td>IS</td>
<td>Information Society</td>
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<td>IT</td>
<td>Information Technology</td>
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<td>ITU</td>
<td>International Telecommunications Union</td>
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<td>MRLGH</td>
<td>Ministry of Local Governance and Housing</td>
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<td>MTC</td>
<td>Mobile Telecommunications Ltd</td>
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<td>NBC</td>
<td>National Broadcasting Corporation</td>
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<td>NEPAD</td>
<td>New Partnership for Africa</td>
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<td>NEPRU</td>
<td>Namibian Economic Policy Research Unit</td>
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<td>NGO</td>
<td>Non-governmental organisation</td>
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<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
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<td>PC</td>
<td>Personal Computer</td>
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<td>SWAPO</td>
<td>The South West African People's Organisation</td>
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<td>UN</td>
<td>United Nations</td>
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<td>UNAM</td>
<td>University of Namibia</td>
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<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organisation</td>
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<td>UTA</td>
<td>University of Tampere</td>
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<td>WB</td>
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Appendix
1. INTRODUCTION

During the last years there has been lots of discussion about the significance of information and communication technology for the development of Africa. It has been claimed that by utilizing ICT Africa could have enormous step in its economic and social development. However, there is a huge divide between the continent and industrialized countries in terms of infrastructure and skilled users. The challenges seem to be enormous in building information society in Africa and it seems that Africans alone can not bridge the divide. There are some development co-operation projects that are developing information society systems in the continent. However, development co-operation has been criticized of importing models from countries that have different situation in economic and social development and thus the implementation of such projects might be problematic in a new environment. In addition, the idea of information society itself is originally from the western world countries and related to societal development in the western world.

The objective of this thesis is to investigate the significance of developing information society in Namibia from the point of view of local people. It can be assumed that in a situation where new systems are aimed to implement in a new environment the most important aspect, to whether the systems will be successful or not, derives from the local people's understanding of the situation and the systems. Also, it is interesting to compare the conceptions of the local people and the theories that are critical towards importing western world oriented system and to investigate whether the conceptions and the theories correlate with each other.

There were ten interviews done for this study. Most of the interviewees have been influenced to some extent by a development co-operation project, CABLE, which has introduced new models of electronic governance and other possibilities of information systems. CABLE is a bilateral development co-operation project between Finland and Namibia, the projects is mostly funded by Finnish official developmental aid. However, the thesis is not an evaluation of the CABLE project but reflecting the common atmosphere in Namibia regarding the ICT issues. Local actors' conceptions about the current state of information society in Namibia are investigated as well as the challenges
and opportunities they see there is for those systems in the country. In addition, there will be some discussion about the cultural impacts that ICTs possibly have had or are having in Namibia.

There is reason to mention, that the topic of the thesis is influenced by several important factors of which all are not included in this thesis. For instance, general development theories are related to the topic. However, since the thesis had to be limited to some issues they are not discussed in this paper. Also, the fundamental phenomena which has affected to the implementation of ICT systems in the developing part of the world, globalisation, could be maintained as too wide theme to be discussed thoroughly in this paper. However, there is a short chapter about the impacts of globalisation to the sub-Saharan Africa since it is tightly related to digital divide which further on is a comprehensive theme behind the discussion of information society development in Africa.

The western world dominance in the information age is discussed by M. Castells and H. Schiller and their theories are introduced since they are classics of information society theorists and have discussed about the deep dimensions of information age on the third world countries as well as other dimensions of it and their theories can be seen as comprehensive views on the matter. In addition, their view points are strongly related to effects of globalisation. In this thesis there is also some discussion about electronic governance in the region since the CABLE project is related to improvement of e-governance by some of its objectives. However, a deep discussion on e-governance is not included since the thesis is a sociology thesis and governance issues can be seen as belonging to other fields of science.

The thesis consists of the theoretical part, which introduces some critical theories about western world dominance in the information age. Further on there is some background information about Namibia, its political and economic conditions and policies influencing to information society development. The empirical part consists of the conceptions of the local actors in Namibia. Finally, there will be conclusions and discussion in which there will be pointed out the main outcomes of the study and further on there is some discussion about the significance of development of IS in Namibia.
1.1. BACKGROUND OF THE STUDY

As being a student in Master's Programme on Information Society I have developed an interest towards the conversation about information society in Africa and the possibilities that ICT offers in order to progress development. I have been lucky to get the opportunities to follow the discussion about African ICT questions in World Summit on Information Society in Geneva 2003 and as an exchange student in Namibia in spring 2004, via student exchange between University of Tampere, Finland and University of Namibia. The student exchange was a part of CABLE-project.

1.2. DEFINITION OF THE RESEARCH PROBLEM

The aim of the research is to find out what kind of conceptions some local actors have about the development of information society in Namibia and its impacts on social and economic development and culture in general. On the basis of their conceptions it is aimed to discuss about the significance and realistic opportunities of ICT in Namibia. As a point of view there is the power relations between Africa and the western world.

To find out the local actor's conceptions about the information society development in Namibia was considered as an important research target because the developmental aid is coming from other countries and the local actors are the ones assumed to take advantage that imported technology. It is interesting to find out how they themselves experience the current situation. It is important to examine development co-operation, not just see that aid projects are doing only good for the country but to consider whether the given aid is in the best possible form. There is another study (introduced in the next chapter) by Adam and Wood, and they examined the impact of ICT on users in sub-Saharan Africa. The study was not bound to any specific point of view and thus my study having critical theoretical background could give a slightly different perspective on the matter.
2. THEORETICAL BACKGROUND

2.1. EARLIER RESEARCH

Development of information society in sub-Saharan Africa has not been widely investigated, especially the social dimensions and effects of building ICT systems in to the countries. During the years 1995-97 Adam and Wood investigated the impact of ICT on users in the region. (Adam&Wood 1999.) The research aimed to understand the users within the context of their ICT application use. The study was based on a grounded theory and it was done by interviewing ICT users mainly in Ethiopia but in other sub-Saharan countries as well. There were 70 interviews done. 15% of the interviewees were senior government officials who were involved in the development of national ICT policy planning, others were high-level managers in business, education and service sector and others technicians and support personnel. Comparative analysis method was used when analyzing and transcribing the data. The impacts of ICT on users were classified in four categories; “the actual impact”, “potential impact”, “constraints” and “actions centred around users and their reactions”. As the names of the three categories are revealing their content, the fourth category remains a bit unclear. It refers to the ways people try to respond to the constraints. The results indicate in this study that the potential impacts are much wider than the actual impacts, and that the constraints are even wider. According to the outcome of the research, the actual impacts are discouraging. During the time the research was done, many of the respondents saw the establishment of ICT systems nothing but “replacement of typewriters with computers” (Ibid.,311.) Resources and thus the actual impacts have mainly been done accessible via external donor supporters. They have made it possible for education field to increase their computer usage and they have increased the amount of information workers. For individual people they have brought cost savings, possibilities to utilise Internet and it has increased job satisfaction for some. However, donor support has lead to dependency and thus it is not supporting the development in best possible way. Donor support has caused

“underutilization of existing technology, reinforced by inappropriate education, lack of awareness and by subscription to inappropriate tools. Consequently, indigenous knowledge and capacity have not been fully developed in sub-Saharan Africa” (Ibid., 311.)
According to the study, the biggest positive impact of ICT in the region is information system development by which means information services set up by different institutions such as governments and banking. A lot of potential impacts came up in the study. The biggest opportunity for developing countries is the distribution of information and knowledge to people regardless of their physical location or level of education. However, this includes problems and will highly likely stay as only a potential impact since there are so many obstacles in achieving access for all. Also, usage of the Internet for example requires at least some level of education, like reading skills. (Ibid.)

Other potential impacts are access to global information networks, distance education and learning, electronic commerce for business and growing decentralisation and improved coordination in organisations. For individuals ICT could also mean increased empowerment. According to the research, the impact will be more quantitative than qualitative, meaning that people will have more computers but they are not doing work of deep quality with them. The respondents expressed their concern that ICT could potentially increase the social stratification. ICTs could make the already existing institutions to work more efficiently and thus promote development in the region. (Ibid.)

The constraints that came up in the study were related to social and technological dimensions. Constraints include high cost of the equipment, limited understanding of ICT by the managerial side, lack of infrastructure, failure of the telephone lines and electricity supply and unsuitable imported technology. It was also mentioned that development support from other countries might be a constraint because the programmes are planned in countries that have completely different economic, social and cultural orientations. As for political constraints there appeared to be non-enabling policies by the government, lack of political stability, weak ICT policy and inappropriate legislation for information sharing. Inadequate utilisation of existing ICT and poor access in rural areas were mentioned to be technical challenges. Also universities were blamed to be responding slowly to the needs of research in the field. (Ibid.)

As a social challenge there was mentioned “information asymmetry between local users and multinational companies, donor agencies and island of sophisticated users”. The biggest challenge according to Adam and Wood is the lack of qualified human resources
and institutional capacity. The outcome of the study is that the gap between the potential and actual impacts of ICT is vast and there needs to be political will of the local people to get over the huge amount of challenges. The researchers also mention that there is a threat that if the communication tools are not properly used and utilised the future development might lead to increasing distribution into those who have the access to information and those who do not have it. (Ibid.)

Another interesting study, concerning only Namibia, is “Capacity and Utilization of Information Communication Technologies within sub-national Structures of Government” done by Mr. Foster Mijiga as the “e-government baseline survey” for the CABLE- project (Mijiga.) The aim of the survey was to find out how the governmental sub-structures in Namibia utilize ICT and how e-governance could utilize the service delivery to the citizens. The study was done in order to develop a strategy for the sub-national structures of government. The information was gathered by questionnaires and meetings, there were 62 questionnaires completed and the research concerned the whole country. The respondents were representatives of regional and local authorities. There are certain shortcomings in the research; the report does not reveal the year the study was done, however it is presumable that it was done about the time that CABLE project was starting, i.e. 2002. Also, there are some contradictions in the report, in other chapter it is maintained that there is lack of infrastructure (p. 17.) and in others the infrastructure is claimed to be adequate (p. 20.) However, it can be concluded that the major challenges found in this study in utilizing ICT in Namibian sub-governmental structures are

- lack of effective planning and coordination of the ICT system implementation in the ministries and departments
- lack of skills and comprehension of the importance of ICT utilization
- lack of access for rural people
- low priority for ICT after other developmental needs
- ICT policies and guidelines are influenced by donor organizations and private sector consultants, this might affect to the objectives of the policies
- lack of human resources
- high cost

(Ibid., 2-21.)
The outcome of this study is quite similar to the one by Adam&Wood; the potential ways of ICT utilisation are much greater than the actual ones. The found challenges in Namibian sub-governmental ICT utilisation support the findings by Adam&Wood even thought the researches were done in different countries.

2.2. DIGITAL DIVIDE

In the discussion about information society in African context the most significant issue is the digital divide. It is hindering Africa's development. Digital divide means the gap between those who have the access to information through the information and communication technologies and those who do not have it. Knowledge and information are necessary tools on the way towards development and they can only be gained and distributed efficiently through ICT. Thus, it has been claimed that the developing countries need to adapt to these new ICT systems in order not to be left behind in development and not to let the divide between the developed and developing countries to become any bigger. This division is likely to have many severe consequences in the future in social and economical spheres of life and thus it needs to be narrowed. (Nulens, Hafkin, Van Audenhove& Cammaert 2001,10; OECD 2000,3.)

There are many parties who have expressed their concern about the widening digital divide on global scale. Several organs of the United Nations have taken some actions to make the gap smaller, also OECD, World Bank, the G8-group and ITU have done some research to find out the consequences of the digital development and lack of it. (Männistö, 2002.)

Digital divide is a multidimensional phenomenon. It appears on the global level, regional level and also at the level of action. Digital divide on global level refers to the inequalities in access between the countries and even the continents. The divide on regional level refers on the gap between different groups within a smaller region, a society for example. The groups might be different income groups, having different educational or ethnic background or they might even be age groups. At the level of action the divide might be for example the democratic divide. This means the division between
the ones who use ICT as a tool in democratic participation and those who do not. (Norris 2001, 1.)

The digital divide can be understood as a result of imbalanced process of globalisation in which many people have been left aside from the information society activities. The basic reason to be left aside is improper infrastructure; there might be lack of computers, lack of telephone lines, lack of people with professional computer skills and also, lack of proper content in local languages. In many cases, there is no proper electricity system that would be needed to maintain the Internet connection. (Nulens et al. 2001, 10.) Also, there might be lack of will or not enough understanding of the advantages of ICTs.

There is also a new digital divide existing, which is the technical divide. Technologies regenerate in such a speed that the hardware becomes old-fashioned in couple of years. This “old” technology is slow, it might be impossible to repair, spare parts might be difficult to find and it does not fit together with the newer technology. It is very expensive to replace the old technology by the new. Thus there might be a gap ahead for a country that has already once bridged the digital divide. This technological divide exists both between and within countries; within countries the elites can afford the newest technologies long before the common people have even adopted the older and simpler ones. (Castells 2001, 256.)

2.2.1. Digital Access Index

The existence of digital divide can be established for example by different indexes. One of these indexes is the ITU's Digital Access Index, DAI, which measures the level of access by including not only the amount of infrastructure but also some new variables such as education and affordability. DAI was developed in 2002 and it includes 178 countries. ITU suggests that this new level of measurement can be used as a tool when countries are reaching towards United Nation's Millennium Development Goals. According to ITU, DAI is a useful tool for different actors, such as governments, developmental agencies and NGOs, they assess the state of access in a country. The index was a part of ITU's World Telecommunication Development Report, that had an

Countries are divided into four categories on the basis of their digital access index; high, upper, medium and low access. The index is based on the five dimensions that have impact on the access. Those are infrastructure, affordability, knowledge, quality and usage. All of the dimensions are equally important in the index. These dimensions have different indicators within them. The level of infrastructure is measured by the number of fixed telephone subscribers per 100 inhabitants and mobile cellular subscribers, also per 100 inhabitants. The knowledge level of a country is measured by using the adult literacy rate and the school enrolment rate. Further on, affordability is “measured by the price of Internet access as a percent of per capita income”. (Ibid.,10). The dimension of quality refers to the speed the connections work. It is measured by the number of international Internet bandwidth per capita and the broadband subscribers per 100 inhabitants. The usage refers to the number of Internet users in a country, the users per 100 inhabitants. The index rate is the average of the five dimensions. (ITU 2003, 6-11.)

Countries belonging to the category of high-access have proper infrastructure, their prices are affordable and skills of the users are adequate. Top ten countries according to DAI are Sweden as number one, followed by Denmark, Iceland, Republic of Korea, Norway, Netherlands, Hong Kong, Finland, Taiwan and Canada.

The upper-access category consists of mainly Eastern and Central European countries as well as the Latin American countries. In this category there is usually imbalance between the dimensions, the infrastructure might be adequate but the prices are too high, which affects to the access rate. In the middle-access economies, there are poorer countries from Latin America, South East Asia and Africa. According to ITU, the biggest obstacle for higher access level for these countries is the lack of infrastructure. The countries “would benefit from greater liberalization of their ICT markets to make them attractive for investors.” They should also start to “increase training and awareness and launching innovative services to attract a larger population online”. (Ibid.,16.)

Countries belonging to the low-access category are mainly from Africa and almost all of the countries in this category are Least Developed Countries. The countries in this
category have also other shortages than the lack of digital access. Many of them suffer from famines, natural catastrophes and shortages of basic infrastructure such as water and electricity. All of these countries have high prices for digital access, the price of an hour in the Internet might be even higher than the average daily income. These are the countries where the Internet could be used as a tool in enhancing development. (Ibid., 17.)

The index number of Finland is 0.79 and it belongs to the category of high-access, being 8th on the list. Namibia has the index number of 0.39 and belongs to the category of middle-access.

2.3. FOR WHOSE BENEFIT ARE THE SYSTEMS IMPLEMENTED - VIEWS OF H. SCHILLER

Digital divide is much about inequality between nations and groups of people, the other group being more powerful than the other and thus being able to have better standards for living. The same rules take place in capitalism. It could be claimed that the information age is just a continuum in the capitalistic history, where some groups are being weaker and the others having more power. Furthermore, implementation of information systems to sub-Saharan Africa opens wider markets for the big transnational companies to sell large amounts of hard- and software to these countries. It could be argued, that by getting developing nations to use the same systems than developed nations do, they are kept under the rules of developed nations, thus being able to be better controlled. Selling information systems to Africa is to keep the continent dependent on the developed nations, by needing to buy the equipment from them, seek guidance in using the systems and keeping the systems running. The current situation can be understood as the continuum of capitalism that began in the colonialist times and now goes on and takes new forms.

These claims can be supported by the arguments of Herbert Schiller, who was interested in the questions of for whose benefit is the information technology implemented and who is controlling the implementation (Schiller 1973, according to Webster 2002, 127). Schiller argued that technology will play a major role in developing countries but this
includes many problems. First of all, he claims that the development in ICT field will take place under the rules of transnational corporate system. This will guarantee that the development is guided by Western world, it “is intended to assure the implantation of Western developmental models -of production, administration, consumption, and education” (Schiller 1981, 16). "This will lead to dependency on the western world and “development patterned on the market model” (Ibid.).

Schiller saw that capitalism, deriving from the United States, had grown to what could be called transnational empire, the US being the emperor and rest of the world being its empire. The term refers to markets on global scale and especially transnational trade via transnational corporations. Information plays a role in promoting the transnational empire, it enables the corporations to work overseas, sell the products for the masses globally, and also, it creates certain kind of ideology of consumption which further on supports the sales of products. (Webster 2002, 127.)

According to Schiller, now that the Third World has become aware of the possibilities of the consumption through information technologies, this causes a threat of political instability, because

“Local elites and the new professional classes quickly accept and embrace the consumerist message. They are also in a position to act on it. For the rest of the population, the overwhelming majority, the effects are less satisfactory. Unable to participate, the artefacts and stimuli of consumerism surround them. At the same time, the character of the economy is distorted to enable a relatively small number of people to enjoy Western consumption standards, while actually diminishing the output of vitally required goods.” (Schiller 1984, 99.)

Typical for transnational empire is also the way news is reported, mainly from the western world point of view. These characters all support the ideology of western dominance on the globe. In addition, Schiller discussed about information imperialism, which refers to the fact that the content in Internet, books, movies and music is mainly western, leaving the poorer nations aside. According to Schiller it is related to cultural imperialism, which in this context can be understood as sustaining western dominance in politics and economy. (Webster 2002, 129-136).
The western world corporations dominate the global trade in the information age, and this is what Schiller called the corporate capitalism. (Ibid.) According to Schiller, national sovereignty is being threatened in the developing countries because via ICTs the transnational corporations get information about the less developed country. Without the acceptance of the country's government this information can be used to benefit corporations in the industrialized countries. (Schiller 1984, 99-100). He also discussed about class inequalities and market criteria of information. These are all characters of capitalism. According to Schiller, information becomes a commodity by being exposed to market criteria. This means it is only available for those who can afford to it. (Webster 2002,128, 136-146.) This might mean that the Third World countries never have the ability to buy the information they need, or at least, they are very unlikely never be the ones who are producing the information and thus getting profit out of it. This rule is sustaining the old power relations between the South and the North.

In the information age there is the class or group of people who can access information and the class that is not able to do so. Schiller described that kind of situation as information stratification. This means that those on top of the class system get the most valuable information and they have more where to choose from while those at the bottom get the “garbage information”. (Webster 2002, 146-149.) The phenomena can be perceived in Namibia; in TV there were shown programmes which could be claimed to be very low quality. They were cheap soap series from decades ago or "educational" TV documentaries, e.g. one of them being a medical documentary from Germany from the beginning of the 80's, telling about machinery and methods that were forgotten in the developed world long time ago. Consequently, it is doubtful that there is any value for this kind of information in a developing country. Presenting this kind of documentaries maintains the information stratification represented by Schiller.

Schiller discusses about the dichotomy of bringing ICT systems into developing countries, he questions the humanitarian development during the era of ICT revolution versus the advantages that the transnational corporations gain. He argues, that

“Communication facilities are inadequate in the poor nations. Informational needs are great. Assistance seems to be one way of overcoming material and nonmaterial deprivation. Under what circumstances then, if any, can the information technology and
processes serve the needs of people -not corporations- and assist in the strengthening of communal autonomy?” (Schiller 1981, 165).

Schiller proposes one answer to the question;

“The use to which the new technologies is put, and therefore its ultimate social value, depends on the internal balance of social forces in the community. The presence of strong, popular social movements and organizations can influence the initial design, the timing of installation and the utilization of the new technology for social ends. Without such social inputs, it is almost certain that the new technology will strengthen the prevailing system of authority and privileged and serve the design of a new international division of labour, establishing communication links that integrate more tightly than ever, the poor world and its governing elites with transnational corporate order.” (Schiller 1981, 165-166).

How information could serve in humanitarian needs, as a social good, according to Schiller is that it could serve in democratic and reasonable decision making in politics and in economy. It would help the government to allocate the resources right, and to maximize the social well-being. Information can lead resources to be used in reasonable targets such as research and invention on social field instead of armament or other harmful production. (Schiller 1996, 34-35.)

2.4. “BLACK HOLE” CALLED AFRICA- VIEWS OF M.CASTELLS

Manuel Castells maintains as well that certain forms of capitalism, such as some modes of production, private ownership and profit seeking, exist in the information age. He uses the term informational capitalism to describe the recent state of global economy. This economy is informational in a sense that “the productivity and competitiveness of units or agents in this economy… fundamentally depend upon their capacity to generate, process, and apply efficiently knowledge-based information”. (Castells 1996, 66).

Castells' arguments concerning the state of Africa in the Information Age are quite pessimistic. He maintains that Africa is a part of the Fourth World, the excluded world, which is an inevitable part of the new economy, the informational capitalism. He even claims that Africans have been denied humanity in the current age. (Castells 1998, 83). Many sub-Saharan African countries are excluded from the global economy because their
trade export structure is concentrated on simple agricultural products which do not produce profit for the countries. Other reasons for Africa's decline in the global economy are the lack of foreign direct investments, lack of human capital, inadequate economic policies and lack of communication. In addition, as the technological infrastructure is essential in gaining wealth in the informational economy, sub-Saharan Africa is lagging behind because it is the least computerized region on earth. This makes it impossible for Africa to compete in the current economy. When Africa was tried to be connected to the global economy in the 1980s through the structural adjustment programmes, the attempt failed and had many severe consequences; unemployment increased and more people have to live in poverty, the agricultural production declined because of erroneous substitutal agriculture, increasing the famines and catastrophes in many countries. Production became disorganised because of the disorganisation of the state. Other serious problems in the continent are violence, deriving from the disorganisation, and diseases, spreading because of the lack of information and education. (ibid. 82-118.) All of these issues have impact on to what extent the information systems can be established in the continent.

According to Castells there is a new form of stratification in the information age. The power relations of capitalism are within the global networks. The networks are controlled by the informational labour. Castells claims, according to Webster, that this class is responsible for designing the technology, legislation and corporate management. The ones not being able to control their work so much are the ones belonging to generic labour. They are the manual workers or the working class. (Webster 2002, 100-102,110-114.)

The newest international division of labour in the information age according to Castells is following: there are the producers of high value, producers of high volume, producers of raw materials and the redundant producers. According to Castells, most Africans are not included in this division. He maintains that in Africa,

“most primary commodities are useless or low priced, markets are too narrow, investments too risky, labour not skilled enough, communication and telecommunication infrastructure clearly inadequate, politics too unpredictable and government bureaucracies inefficiently corrupt” (Castells 1996, 135, 147).
Thus Africa has irrelevant structure for the new economy, it is a “black hole” of the new economy. (Castells 1998, 161).

Castells maintains that the new techno-economic system has deep effects on development. As some people have the access to networks and some have not, the system has two kinds of impacts on people's lives; for others it is increasing the wealth and for others it is increasing poverty. According to Castells this can be understood as an expression of the digital divide. First of all, some people suffer because in the networked structure of the new economy, in which everything can be utilized for a desirable time, it can as easily be abandoned. This means exploitation of resources and ignorance for the people in the locales. The second fact affecting on the deprivation of some people is that developing countries lack proper systems of education and thus they have no sources of value in the new economy where information and knowledge are the main sources of wealth. Important for the knowledge economy is also the technology, the infrastructure, and that also is missing in the developing countries. The third factor is the volatility of financial markets in the new economy. Since everything is global, the financial markets have vulnerable impacts on people's lives. When financial crisis follow each other, the workers have to suffer. People are also loosing or giving up their jobs in agriculture which leads to urbanization and further on to economical and social deprivation and suffering. The fifth element is the pressure under which governments have to deal in the new economy. They have to manage under pressure, where the local and global rules and laws conflict with each other, and the governments then might fail to solve the contradiction. This has many consequences, one of which might be the unorganised labour force. A side effect of the new economy is also criminality. Criminals utilise the global networks and this is related to corruption and disorganisation of many states. The new techno- economic systems affect to sovereignty and legitimacy of countries, and it might reduce the level of democracy. Castells even claims that this crisis of legitimacy may lead to civil wars and massacres of people, famine and spreading of epidemics. Further on, he maintains that all of these side-effects are consequences of the elites trying to use their power over people in order to utilise everything they can to profit in the new economy and then people trying to manage in this pressure. (Castells 2001, 265-268.)
Further on, Castells suggests that there can be no development in the developing countries without the Internet. It is a tool towards development and should not be considered separate of the other needs, such as health, education, water or electricity supply. Internet is needed as the base for the economy and efficient management systems. The Internet can therefore assist in all the developmental needs. (Ibid.) However, after describing the "disastrous circumstances" in the continent, it would be interesting to find out, how Castells suggests the implementation of ICT systems to take place in Africa.

Castells claims, that a reason why the western world countries have given aid to Africa is because Europe is afraid of flows of immigrants if the disastrous circumstances in Africa do not change. Another reason is to take advantage of the still remaining natural resources on the continent. (Ibid.)

It could be concluded that Castells' thinking is quite fatalistic. He sees the Information Age as a bipolarizing process where the others are the winners and others are the losers. Sub-Saharan Africa belongs to the losers, only South Africa being exception. The impression is that Castells sees not much hope in Africa's development.

The views of Schiller and Castells introduced in this paper are related to discussion in very general level. However, they concern very significant issues on the background of information society development in the continent.

2.5. IMPACT OF GLOBALISATION ON THE SUB-SAHARAN AFRICA

The Information age is tightly connected to globalisation and vice versa. Globalisation has become possible through the employment of information and communication technologies. Alternatively, it could be argued that ICTs only speeded up the process that was going on already before. Globalisation can be understood as the process and effects of global trade and world-wide spreading of information that further on has impact on culture in many levels. According to OECD (1994), globalisation has four dimensions, those are “decline of the US post-war economic hegemony and political leadership”, the second one being “rapid growth of global financial markets since the late 1970s,
facilitated by the deregulation of financial markets on the other hand and the new information technologies on the other”, the third dimension is “the globalization of corporate activity”, media facilities being one of the most important of corporate activities, and the fourth factor the raised global awareness over environmental hazards, such as ozone depletion. (Oman 1994, pp. 12-13.) According to Scholte, “globalization has substantially strengthened the position of capitalism as the prevailing structure of production in contemporary history” (Scholte 2000, 111).

What does globalisation mean to sub-Saharan Africa, then? It could mean that more information is available for the governments, private corporations and civil society to use in their decision making. Thus the information that has become available through globalisation can have great impact on the socio-economical development, meaning new opportunities in fields of education, business, health and governing strategies. (ECA 2003) According to NEPAD, if the countries manage to get hold of the information available in the global networks, they could get some valuable information to improve their economy and thus speed up the process of development. A well-controlled integration to the world economy would be the best guarantee to get rid of poverty and stop the process of marginalization, NEPAD claims. According to NEPAD, ICTs could play a major role in connecting the continent into the global economy. Technologies could support creation of market areas both within the continent and also globally. (NEPAD 2001, 6, 24). However, there are plenty of people in Africa who still have no access to the information and knowledge that could have positive impact in their lives:

“In Africa, poor ICT infrastructure, combined with weak policy and regulatory frameworks and limited human resources, has resulted in inadequate access to affordable telephone lines, broadcasting, computers and the Internet. African teledensity remains below one line per 100 people. Service costs are also high: the connection cost in Africa averages 20 per cent of GDP per capita, compared with the world average of 9 per cent and 1 per cent for high-income countries. Africa has been unable to capitalize on ICT as a tool in enhancing livelihoods and creating new business opportunities, the cross-border linkages within the continent and with global markets have been constrained. Although many countries in Africa have started ICT policy reforms, service penetration, quality and tariffs have not yet improved.”

(NEPAD 2001, 25.)

In the globalisation process the reality does not look very promising for Africa.
“The poverty and backwardness of Africa stand in stark contrast to the prosperity of developed world. The continued marginalization of Africa from the globalization process and the social exclusion of the vast majority of its peoples constitute a serious threat to global stability. (...) In Africa, 340 million people or half of the population live on less than US$1 per day. The mortality rate of children under 5 years of age is 140 per 1000 and life expectancy at birth is only 54 years. Only 58 per cent have access to safe water. The rate of illiteracy for people over 15 is 41 per cent. There are only 18 mainline telephones per 1000 people in Africa, compared with 146 for the world as a whole and 567 for high-income countries.”

(NEPAD 2001, 1).

Africa was first integrated to the global interactions during the colonial era, and its position has still not changed much from those days. Early global interactions, in the forms of colonialism have mainly had negative effects on Africa, as NEPAD claims;

“Colonialism subverted hitherto traditional structures, institutions and values or made them subservient to the economic and political needs of the imperial powers. It also retarded the development of an entrepreneurial class, as well as middle class with skills and managerial capacity. At independence, virtually all the new states were characterized by a shortage of skilled professionals and a weak capitalist class, resulting in a weakening of the accumulation process. Post-colonial Africa inherited weak states and dysfunctional economies, which were further aggravated by poor leadership, corruption and bad governance in many countries. These two factors, together with the divisions caused by the Cold War, hampered the development in a number of countries.”

(NEPAD 2001, 5).

Some instances have claimed that globalisation reduces poverty. One of these is the World Bank. According to Tammilehto, researchers of the WB have published a report in which they claim that trade liberalization leads to higher growth rates and that economic growth increases the incomes of the poor thus reducing poverty. In his report Tammilehto argues against these claims by maintaining that globalisation has caused increased poverty in health, power, security and socio-cultural dimensions. One of his central arguments is that all the forms of deprivation are only possible because of the existing power structures between the North and the South. In addition, he suggests that establishing development aid projects in the South might just be hidden support for that power structure. The power structure is supported by empowering the Northern neoliberal models of economy and politics. (Tammilehto 2003, 60-61.)

In terms of culture, globalisation for Africa means that it gets information flows from the Western world, in forms of television programmes, movies, music, fashion, most of the
content in previous being western origin. There have been claims that globalisation is same as Westernization, or Americanization. As Schiller said, information imperialism; most of the information flows from Europe or America to the sub-Saharan Africa and hardly any information vice versa. Alan Modoux calls the people excluded from the information society to be living in a cyber ghetto. He sees the current situation between the North and the South as a continuum to colonialist history and to the Cold War. He claims that the western countries have had monopoly over the media systems of developing countries until the end of the Cold War in order to better control the people in those countries. (Modoux, 2002.) The local cultures and communities become weaker because there is the stronger, global mass culture that is mastering in the big cities. (Tammilehto 2003, 45-47.)

2.6. POTENTIAL IMPACT AND EXISTING CHALLENGES ICT HAS IN SUB-SAHARAN AFRICA

Digital Divide has impacts on many levels of a society. The fields in which ICTs are expected to improve people's lives in Africa, are for example trade, health, education and research, food security, tourism, crisis and conflict management, job creation and issues related to gender and development. (Nulens et al. 2002, 58-59). In many fields it has been claimed that ICT is a tool for development. ICT is expected to bring people together and make them aware of factors affecting on their lives. Also, it is believed that by utilising Internet, the economy of Africa will boom because new business areas will be created and the markets become larger. ICT is expected to bring transparency to governance in Africa which, by western point of view, has been corrupted and disorganised. It is obvious that development of information society in Africa will not be easy. The utilization of ICT in Africa is difficult because there is no proper infrastructure, no common understanding of the aims or possibilities of ICTs, no sustainable system of institutions which would develop the ICT system and also, there is lack of education and economical resources.

According to NEPAD, the advantages that Africa would gain through efficient ICT utilisation is that
“It can give impetus to the democratisation process and good governance; it can facilitate the integration of Africa into the new information society, using its cultural diversity as a leverage; ICTs can be helpful tools in wide range of applications, such as remote sensing and environmental, agricultural and infrastructural planning; the existing complementaries can be better utilised to provide training that would allow for the production of a critical mass of professionals in the use of ICTs; in the research sector, African programmes can be established as well as technological exchange programmes capable of meeting the continent's specific needs, with particular regard to the fight against illiteracy; ICTs can be used to identify and exploit opportunities for trade, investment and finance; they can be used to establish regional distance learning and health education programmes to improve the situation in the health and education sectors; in conflict management and the control of pandemic diseases, ICTs will help towards the organisation of an efficiently early warning mechanism by providing the tools for constant monitoring of tension spots.” (NEPAD 2001, 24.)

According to Nulens et al.,

“of the potential applications emerging from the global information economy, some have greater strategic importance for Africa than others, and may have more significant impact on socio-economic development. Applications of potential strategic importance include following: content development, electronic commerce, education, learning and research and rural development”

(Nulens et al.2002, 94-95.)

The content development in Africa could mean that the rich African cultures would be utilized and capitalized. This would bring economical benefits for the countries. There are also some areas in which Africans have got the genuine knowledge, such as ecology, traditional healing methods and wildlife behaviour. This knowledge could have enormous value if utilized correctly. Content development would also mean to create more web pages containing local information. By creating own pages Africans would create jobs for themselves and be less dependent on content that has been created on western-world values and needs. The second opportunity, the electronic commerce, would widen the African markets both locally and world-wide. Small entrepreneurs would benefit by distributing knowledge through information networks. (Nulens et al. 2002, 96-98.) They could also have bigger markets for their products. Especially in Africa where indigenous cultural items such as drums and special carving and fabrics are produced, the world-wide markets could be enormous for those products.
While trying to improve Africa's access online and trying to establish some sort of information society in the continent, many things need to be taken into account. First of all, network access needs to be built, that consists of information infrastructure and the hardware and the software required in the process. General infrastructure, not only electricity but infrastructure such as roads and airports are essential. They are needed to get the equipment and technology to desired places. Affordability, as discussed earlier, is an important factor. Naturally, higher the price of telephony is, lesser there is Internet penetration. In addition, speed and quality of the Internet connection affects to attractiveness of using it. In many developed countries the connections are fast and this encourages people to use them, using is easy and not time-taking. Service and support are again a new factor affecting to usage of ICTs. An example of this is the speed in which telephone lines are repaired. In developing countries it might take ages to get the technology to work again. (Sachdeva 2003, www-document.) There needs to be political will to get and keep a country or a region on-line. For instance, there happened unfortunate incident in Namibia; the infrastructure was in place and people had been educated to use it, but a municipality had not been able to pay its electricity invoice, so the connections where cut off and people had no access to Internet or a computer.

Social capital is a concept referring to capable users. People need to be educated, they need to be keen to find out new ideas and also be able to read and understand what they read. The content in the Internet is mostly in English and this might cause problems for people whose native language is something else. Africans need to pay attention on the education of their children in basic literacy in order to work in text-based environment. "e-Learning" is a part of social capital. Markets for ICT workforce are important in development of ICT systems. There has to be plenty of opportunities so that people see a reason to study ICT related field. A serious problem that Africa is facing is the brain drain. Brain drain derives from the lack of sufficient local universities. People with skills and resources move abroad to study and because of lack of relevant jobs in their country of origin they stay abroad. According to Adeya and Cogburn (Nulens et al. 2001) more than 30 000 Africans with PhDs live outside Africa. In order to improve African social and material well-being it would be relevant to create jobs for these people to stay in their home countries. (Sachdeva 2003, Nulens et al. 2001, 87-89.)
Financial system of a country affects to the implementation of information society. Payment systems, reporting of money movements and taxation need to be under control. The country needs to have a special ICT policy in order to plan an effective implementation of ICT systems. Also, the business environment is an affecting factor. It includes laws, for example. The laws are needed to regulate “intellectual property protection, privacy, security, data protection, electronic payments and currency and wide-ranging consumer protection” (Nulens et al 2001, 92). There has been a lot of debate about the intellectual property rights. They might undermine the already achieved development in some countries and be again one form of industrialised countries to control the developing countries.

The opportunities of implementation of information society in Africa are enormous. By starting to use ICTs the African countries could have huge step in their development, without having to go through the stages that other industrialized countries have gone. In this way Africa could “leapfrog” and achieve quickly the optimal level of development.

2.6.1. An Example: e-Governance in sub-Saharan Africa

In this chapter one of the opportunities of ICT utilisation as a tool for enhancing development is discussed. Electronic governance is taken as an example because it is the field that probably most has been under discussion of the ICT implications in the African context. Also, as mentioned before, the development co-operation project that was going on in Namibia at the time the interviews for this study were done was related to e-governance by some of its actions.

E-governance refers to governance where information and communication technologies are used for communication, learning, organisation, management, social capital, transparency and inclusiveness. Communication and learning become more efficient by utilising ICTs because of increased capacity in information production, utilization and exchange. In organisation and management ICTs are expected to bring into use new pooling resources through networks and partnerships and to improve negotiation practices and effective network management. Concerning transparency and inclusiveness, ICTs improve decision-making processes, increase openness, transparency and
accountability and they improve chances for participation, inclusion and democratic governance. (Anttiroiko 2002.) As UNESCO describes;

“Information and Communication Technologies are seen as a tool for achieving good governance objectives and for the implementation of more efficient and effective administrative procedures. The use of ICTs can significantly improve the services and information flows from administrations to the people, as well as the capacity of coordination among different branches and bodies of government, and communication among governments, citizens and business. Finally, owing to their potential to enhance decentralization, accountability and transparency, ICTs can have a positive impact on the role of African countries in the global political economy.” (UNESCO, www-document).

E-governance is supporting good governance. United Nations determine good governance to consist of following issues:

“Principles of sensible economic and social policies, democratic decision-making, adequate governmental transparency, financial accountability, creation of market-friendly environment for development, measures to combat corruption as well as respect for the rule of law and human rights.” (Ginther, Denters& de Waart 1995, 1).

e-Governance has been widely discussed in the United Nations' and other international forums because it is related to developmental issues between the North and the South. It is also related to democratic governance which is close to UN grounding principles as it aims to support democracy. Use of ICTs is expected to empower electronic form of democracy as well. e-Democracy is expected to support marginalized and disadvantaged groups, provide context specific information in critical policy areas and create efficient ways of information exchange. e-Democracy is also expected to create more integrated developmental policy. (Anttiroiko 2002.) In developing countries electronic democracy is probably the only possible and effective way for people in the rural areas to express their opinions and get information about current policy topics in reasonable time.

There are e-governance initiatives in many African countries already. The countries aim to increase interaction with stakeholders and further on, to improve political representation. The most advanced form of electronic governance would probably be online voting, but there is a long way to achieve that. At least the candidates in elections can be introduced in the Internet and further on, the results of elections can be announced in the Internet also. According to ECA's study, by June 2002, there were about 706
websites available that represented African public institutions. The highest amount of governmental web sites was in Nigeria, Kenya, Mozambique, Mauritius and South Africa. However, the study did not evaluate the quality or usability of those sites. Those sites were mainly concentrated on providing information on the rules and regulations and introducing functions and activities of the government. According to ECA, the survey revealed that there is a lot of fragmentation of information between the governmental bodies. In this kind of situation the national strategies and initiatives are important in order to develop more coherent ICT policy in a country. (ECA 2003, 10-11.)

The challenges in developing ICT based governing systems in Africa, according to von Haldenwang, include the fact that introduction of new administrative models might lead to “political distortions” because political interests are related to the traditional models. While new models are introduced there might be some party who feels that it will lose some of its political power in this reform. Furthermore, increased access to information might also lead to an unwanted situation where a state might use the information to empower its authoritarian position. Protection of data and legal security are thus as important as the new introduced model itself to get a right kind of use for the information. Von Haldenwang maintains a question about who will be the beneficiary in the end, in the implementation of e-government systems. Will it be the citizens, who it should be, or the governing elite? There is also the third level, the application market that is also eagerly pushing forward these initiatives. (von Haldenwang 2003, www-document.)
3. CASE STUDY ON NAMIBIA

3.1. GENERAL BACKGROUND OF THE COUNTRY

Namibia is a sparsely populated country. There are about 1.8 million people living in an area which is 824,269 square kilometres wide. Nearly half of the country is desert. Thus the highest population density is from the north, the agricultural and mining zone down to Windhoek, the capital area. Also the coastal area is quite thickly populated. (Kiljunen 1981, 23-29). The population consists of variety of different ethnical groups and their languages; 49% of the households use Oshiwambo as their first language, Nama/Damara is used by 11.5%, Afrikaans by 11.4%, Kavango by 9.7%, Otjiherero by 7.9% and only 1.9% use English. (The Namibia Vision 2004, p. 124). The variety of ethnical groups has partly its roots in the colonial history.

The first Europeans came to the country in the 14th century. They found the natural resources and began to settle to the country. The conquest of Namibia began from south, from Lüderitz, by German conquerors. Formally Namibia became a German colony in 1890. The troops of the Union of South Africa attacked the territory in 1915 and finally in 1919 Germany loosed all its rights on the land. The area became to be called South West Africa and it became a mandate for South Africa. South Africans implemented strict racial discrimination by laws and by creating separate territories for indigenous peoples and for whites. The mandate was important to South Africa because of its natural resources and its geographical location. In 1969 United Nation's General Assembly made a resolution according to which Namibia had to be given to the responsibility of United Nations. South Africa did not accept this resolution and thus from the date on that the termination of the mandate became valid South Africa was in illegal occupation. (Kiljunen 1981, Government of Namibia; www-document.)

Namibia gained independence on 21st March 1990. This was after 40 years of diplomatic debate and 20 United Nation's resolutions on Namibia. The dominant party ever since has been SWAPO and the president of the country is their leader Mr. Sam Nujoma. SWAPO has most places in all organs of government, in National Assembly, city and town councils and at the local authority level. After the apartheid era, which took place when Namibia was under the South African rule, the SWAPO has replaced the white-rulled
administration by its own members. There is no significant opposing party to SWAPO. In 1989 there were 56 registered parties at the first democratic elections of which altogether seven got a seat at the Parliament. (Soiri 1998, 1-3, Government of Namibia; www-document). The independent Namibia inherited laws from the colonial era. After the 1992 elections the governance has become more people-centred and decentralized because of the occupation of regional and local governance. In 1996 the Cabinet adopted a decentralisation policy, that was launched in 1998, due to which many responsibilities and functions were moved from ministries to local and regional authorities. (UN 2001,www-document.) Decentralisation is one of the most important developmental challenges currently.

Other challenges include the economical imbalance within the country; there is huge gap between the rich and the poor. The gap mainly derives from the times of Apartheid. Poverty is a significant problem in the country. In 1990, 5% of the population owed 80% of wealth. Since then, there has been some improvement in employment and access to services by the poor people as well and the economic growth has been moderate. In 2001 the growth in GDP was 3, 5%. According to per capita income Namibia can be defined as a low middle-income country. However, the income distribution remains high and so does the poverty. Currently, 10% of the population receive 65% of income and are consuming 44% of the private consumption. The wealth is concentrated in urban areas which further on encourages people to move to cities. However, these people are under threat of becoming unemployed and continue living in poverty. In future it would be essential for Namibia to transform to a manufacturing and service providing country in order to develop. (The Namibia Vision 2004, 61-62, 101-103.)

Namibia is a receiver of developmental aid. In the 1990's the aid was 12,5% of the revenues of the government. Most of the aid is received from bilateral donors. The development aid is used in fields of human resources development, social sectors such as housing and water networks, in natural resources such as agriculture, forestry, fisheries and in the fields of transportation and communication. Only minority of the aid has been used in administration. The biggest fields in aid investments have been the social sector and human resource development; they together receive 50% of the aid. The general aim of the development aid in Namibia is that it should support economical growth. New
fields in which the aid has been used are decentralisation process and sustainable development of the environment. (The Namibia Vision 2004, 184-185.)

3.2. NAMIBIA VISION 2030

In April 2004 there was published a national development plan called Namibia Vision 2030 which describes the long-term development framework for the country. The vision combines short-term National Development Plans to a coherent description of the targets of development. The Vision consists of eight thematic reports which include all spheres of life; inequality and social welfare, peace and political stability, human resources development and institutional capacity building, macroeconomic issues, population health and development, natural resources sector, knowledge, information and technology and factors of external environment. (The Namibia Vision 2004, 13.)

The objective of the vision is that by the year 2030 Namibia is a developed country where all citizens have safe and decent living environment, the political system is democratic, effective and legitimate guaranteeing peaceful society and where human resources are developed. Namibia aims to be an industrialised country, competitive on global scale. Citizens will enjoy high standards of living as the diseases are under control, including HIV epidemic. Education will be free and accessible for all and health care will be taken care of. The environment will be taken care of in a sustainable way and it will be utilized to support the economy. Namibia will also be a knowledge-based society. It also aims to transform from an aid receiving country to a provider of development assistance. (The Namibia Vision 2004, 40-41.)

In the vision there is an entire chapter concerning information society development in Namibia. This chapter could be compared to information society strategies that have been done also in other countries. Finland, for example, has done a similar strategy on future development, the newest from the year 2005. (Tulevaisuuden verkottuva Suomi) The Finnish strategy outlines the principles and philosophies behind the Finnish information society development and introduces some guidelines for actions in the future. It seems
like Namibia has taken influences from the western world and created a similar strategy as is used in policy outlining in the West.

The Namibian Vision does not analyse deeply the current structure of the Namibian society but discusses on very general level about the ambitious targets. It could be claimed that if Namibians would like to have an information society strategy it should be more realistic in terms of the targets and the huge challenges the country is facing in other fields as well. Also, compared to Finnish strategy for instance, in the Finnish strategy there is quite detailed information on Finnish society and the use of ICT, as in the Namibian strategy there is only introduced very overall principles and targets. In reality it is supposable that it would be easier to follow the strategy or the guidelines if there would be more detailed information on how to proceed towards the targets. However, these kinds of future strategies mostly tend to be too positive and optimistic, but again if they are written in order to achieve something better, they should also be realistic.

The vision concerning ICT in Namibia Vision 2030 is the following:

“Advanced microelectronics-based information and communication technologies are used to achieve social and economic transformations in Namibia; the costs of ICTs continue to fall as their capabilities increase and ICTs are being applied throughout all sectors of the economy and society to serve development goals.”

(Ibid., 79).

In the vision it is claimed that in order to be competitive on global markets Namibia should start to develop specialised industries and value-added services. Namibia should become an active user and producer of ICTs. The vision claims that at the moment the country suffers of lack of human resources on the field. The skills are imported from abroad. Training and education in Namibia thus are essential for development. Other constraints are lack of competition in the telecommunication field, lack of hardware and software producers in Namibia, connectivity costs are high, the bandwidth of 7.2Mb is very low and the connections are slow. Also the libraries were accused of not having Internet connections or other materials to support the information availability. (Ibid., 77-78.)
The worst-case scenario of 2030 is that there would be no ICT policy nor education and training in the field. Namibians would remain computer illiterate. There would still be limited access to ICTs and connectivity costs would remain high. The access areas would still be urban, there would be no investment in wireless technology and there would be “dependence on imported foreign equipment, services and knowledge and expertise in ICT”. (Ibid., 80.) Things that Namibians should do in order to prevent this scenario and to develop would be first of all to create a comprehensive ICT policy. Then there should be investments so that local ICT industries could be developed. The bandwidth should be exchanged to at least 1 GB.

The vision for 2030 is that Internet access is available and used by most Namibians and the costs are reduced. ICT skills of citizens are trained in all levels of education and all citizens have access to ICT-based training. There will be wireless technologies installed across the country and there will be local production of equipment. In 2030, “the ICT sector is economically the most important sector in Namibia, Namibian-based ICT service companies are competitive players on international markets and Namibia is exporting, to a large extent, tailor-made hard-and software to the worldwide market using e-business.” (Ibid., 80-82.)

3.2.1. Other developmental needs in Namibia Vision 2030

In order to achieve the targets introduced for information society in Namibia Vision 2030 there are plenty of facts that need to be taken into account when planning the information society. Information society development is related to general development of the country, including aspects of social and economic wellbeing.

A fact influencing greatly on Namibians' future is the HIV/AIDS epidemic. Since the population is already small the epidemic sets a serious threat to population growth and development. According to the Vision, in 2002 22% of the pregnant women were HIV positive. AIDS is the leading cause of death in the country. The biggest impact of the epidemic will be seen in 2015. The Vision suggests that in 2030 the life expectancy would have grown to 68 years for males and 70 years for females. The current rates are 48 for males and 50 for females. The life-expectancy has declined significantly because
of HIV. In 1991 the rates were 63 for females and 59 for males. Thus the Vision sets a target of getting the disease totally under control. However, the current situation is not very promising since the Vision claims that only 9% of the women say they use condoms. (Ibid., 44-56.) It could be claimed that HIV/ AIDS will be a serious threat to the development of the country's human resources and further on to its economy.

The population of Namibia is also influenced by inadequate water and sanitation facilities as well as lack of health services. At the moment most services are concentrated in the cities. In 2001 the rate of urban population was 33%. In 2030 it will probably be 75%. People in the rural areas lack access to potable water, electricity and transportation. Currently 75% of the population has access to safe water. 41% have toilet facilities. Many households also face food insecurity because of low agricultural production, drought, low incomes or limited employment. In 2030 Namibia aims to be food-secure country and all citizens will have access to water and sanitation. Also the basic social and health care services will be available both in the cities and rural areas. (Ibid., 54-56.)

Education and training are essential factors for Namibia in transforming to knowledge-based society. Currently there are few shortcomings in the education system. Only 50% of the teachers are qualified for the job and only 2% of the adults have gone through university education. Dropping out of school is very common in Namibia, less than 20% of the pupils reach the senior level. In 2030 Namibia aims to provide unified and qualified education system for all. Great improvements are expected to take place in secondary and tertiary education as there will be demand for professionals from all areas of sciences. It is expected that University of Namibia and Polytechnic of Namibia will train more professionals to natural sciences, medicine, social sciences and financial services. There is also need for engineers, technicians and agriculture professionals as well as nurses and teachers. Currently the unemployment rate is 31% and there is a large category entering the labour markets that do not have enough skills for the jobs that are available. (Ibid., 73, 88-94.) Namibia will face a great challenge when changing the structure of labour force's education. It will be rather difficult to achieve the demands of knowledge based society in such a rapid time when taking account the current situation and the challenges there are in the education field.
Regarding the development aid Namibia aims to transform from an aid receiving country to an aid providing country by 2030. At the moment Namibia is not dependent on the aid as many other African countries are. Currently the development aid is concentrated in human resource development and social issues such as improving access to water and adequate housing. The main aim is to reduce poverty by supporting economic growth. By increasing industry and trade, getting more foreign direct investments and replacing external resources with internal ones Namibia will achieve a condition where it is no longer in need for foreign aid. The Vision also claims that it is important that local people gain the knowledge and skills from foreign experts so that when the foreign people leave the country the knowledge remains. (Ibid., 186-187.)

In terms of globalisation the sub-vision for 2030 is the following:

“The benefits technology, trade, investment and capital flows have contributed to a significant reduction in poverty in most regions of the world, and Namibia enjoys optimal participation and integration in the global village.” (Ibid., 198).

The Vision maintains that although since globalisation the foreign direct investments have increased in developing countries, Africa has only got 5% of them. This means that Africa is marginalising in the world economy. Thus Namibia should develop such an environment that interests investors. By 2030 Namibia wants to have investments in economy and infrastructure and it aims to be a global competitor. The Vision suggests that there will be inflows of capital from other countries to Namibia. (Ibid.,198-199.)

3.3. ACCESS TO INFORMATION SOURCES AND COMMUNICATION TOOLS

In terms of the current ICT infrastructure, there is only one telecommunication operator in the country, Telecom Namibia. It is owned by the state. State also owns mainly the Mobile Telecommunications Ltd. (MTC) that provides mobile telecommunications services. In 2003 there were 200 000 mobile phone subscribers for MTC and 121 500 fixed line subscribers for Telecom Namibia. Namibia's fixed line teledensity is 6.4 per 100 inhabitants. MTC has two services, the contractual service and the pay-as-you-go service of which the latter is more popular. Mobile phones are more popular than the
fixed line phones because they are cheaper and quicker to access because of the geography and the population distribution of the country. As for the Internet, there are seven service providers of which two are state owned. In 2002 there were approximately 22 000 Internet users in the country. Accessing Internet is expensive because of the high phone call prices. Competition in fixed line services would decrease the prices remarkably. In Namibia, there were 252 Internet users per 10 000 inhabitants in 2001. There have not been many investments on telecommunication sector, because it is costly and not effective and thus large areas of the country do not have proper infrastructure or telecommunication systems. Also, many rural areas do not have proper access to water or electricity. 67 % of the population live on rural areas, areas which are least developed by infrastructure. The biggest population density is in the North which is far away from the capital city. In rural areas 17 % of the people had access to television, 76.6 % to radio and 7.2 % to the daily newspaper while in urban areas there was access to TV for 66.4 %, to radio for 84.5 % and to daily newspaper for 34.6 % of the population. There was access to computer for 2 % of the people in the rural areas and 18.2 % in the urban areas. There exists a clear digital divide between the rural and urban areas. (Stork& Aochamub 2003, Ministry of Information and Broadcasting; www-document.)

In 1991 there was created National Broadcasting Corporation, NBC. It is the only state owned television station in Namibia. NBC also sends out radio programmes, in nine local languages and those programmes reach 97% of the population. There are private radio and TV stations available in Namibia as well. (UNECA, www-document.)

There have been some initiatives and projects developing information society in Namibia already. To mention two of the projects, there is the Finnish-Namibian CABLE-project to improve local authorities' capacity building. Electronic governance was significant part of the project, it was implemented in order to support democratic and good governance and decentralisation in the country. Another project having impact on IS development is the SchoolNet-project. That is an international organisation which provides computers to schools.
3.3.1. CABLE- project

One of the major initiatives related to the country's e-government development, and information society in general, is the CABLE- project. The project was established between January 2001 and March 2004 and it aimed to improve local governance by improving the local authorities' capacity to deliver services and advance democracy. It supported the ongoing process of decentralisation in the country's administration and policy practices. The project improved local authorities' capacity in budgeting, planning, and public asset management. (CABLE Project Document 2001.) The project consisted of many areas and in this thesis I only introduce the activities related to ICT issues which were only a part of the project.

As stakeholders in this project there were Ministry of Local Governance and Housing, NPC (National Planning Commission), Ministry for Foreign Affairs Finland, Embassy of Finland in Namibia, UNAM, UTA, Pilot Local Authorities, ALAN (Association of Local Authorities Namibia), ARC (Association of Regional Councils), Regional Councils, The Centre for Public Service Training and some other projects and donors. (Ibid.)

There were seven pilot local authorities; Otavi, Katima Mulilo, Rundu, Opuwo, Khorixas, Okahandja and Karibib. The activities of the project took place in those municipalities. New skills were introduced in order to improve transparency and efficiency. One of the most significant renewals in these towns was the establishment of the e-offices. (CABLE Overall Objectives and Project Purpose) The e-offices are mostly used by the local authorities but after office hours they can be utilised by any of the citizens. The idea of e-office is that desks and computers are shared, thus many people get access to them and networking is expected to improve. Shared computers are also cheaper than personal ones. The e-offices were established by Primenet Ltd. Primenet planned and organised the technology and the furniture to the e-offices and provided training for the local trainers. According to Primenet itself, the idea of the company and the CABLE project has been that “all orders should be made from Namibia and local trainers should be Namibian people.” (Savolainen et al. 2003.) There is a Primenet Namibia website designed to support e-office use and CABLE-project objectives. The website aims to deliver news, for example. There is also a teamwork area, e-learning area and personal home page. The website offers e.g. facilities for email, calendar, intranet for discussions.
and education. The e-learning area includes for example IT course. Primenet aims to be a tool for a local community through which to discuss and gain knowledge. (Savolainen et al. 2002.)

In the project, local authorities' awareness of ICT questions was enhanced and also the infrastructure and technology, that was needed for electronic governance, was improved. The Internet connection systems were updated and consulted in the seven municipalities. The project also supported ALAN's capacity to provide advice and support to the local authorities. It strengthened ALAN's capacity to promote decentralisation in the country. Human resource management was paid attention on by organising education and training for the MRLGH key staff and promoting the local authorities ability to do so. Training was done in different workshops. A significant outcome of the project was a National e-Government Strategy for Namibia. (CABLE Overall Objectives and Project Purpose.)

3.3.2. SchoolNet

SchoolNet is a non-profit action based organisation and the main objective is to get all the Namibian schools to be connected to the Internet in the near future. This far, it has connected about 250 schools since it started in 2000. It aims to implement sustainable and low cost Internet facilities to the schools. It receives donations and support from various actors such as ministries, NGOs and corporations. It uses open source software and both new and recycled computers, installs the equipment and implements the wireless or land-line solutions, it can also build up systems using solar electricity. In rural areas where there is lack of electricity the use of Internet would be impossible without solar energy. According to NEPRU, connecting a school to Internet via this solution, the recycled computer, open source software and solar energy the cost is only a tenth of a commercial solution. SchoolNet is having a project of erecting 45 towers to create wireless connection to schools which do not have telephone. These towers are mainly erected in the northern part of the country. SchoolNet has also provided AIDS prevention project, there are webpages which contain information about AIDS and guides how to start one's own project against AIDS in one's own community utilising Internet. (Stork & Aochamub 2003, 52-53. SchoolNet Namibia; www document.)

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4. EMPIRICAL PART - THE METHODOLOGY

4.1. DESCRIPTION OF THE INTERVIEWEES AND THE INTERVIEWS

To find out the conceptions of the local actors I made face-to-face interviews. There were ten interviews done altogether. The interviewees were reached and chosen by using contacts. The CABLE project manager Timo Palander gave me a list of people with whom he had been working with in ICT issues in Namibia and whom he knew are well aware of ICT related issues in the country. He gave me a list of about 25 names on it, the list consisted of academics, researchers and officials. I went through the list and tried to reach these people by phone. The final group of people that were interviewed were the ones I was able to reach and make an appointment with. As the time I was able to spend in the country was limited the number of interviewees was to be limited also for that reason and I had to decide to interview those I was able to reach first since it took some time to make the appointment. Some people whom I called said that they are interested but they do not have time in the near future for an interview and one person refused for the interview. As the aim of the research was to interview ICT users and people who are actually affecting the country's ICT policies and people working with it daily in order to get a realistic picture of the situation, it was only possible through the project managers contacts to get the interviewees to the research in such a short time. I suppose the process would have been much slower if I had not used Mr Palander as my contact person. Now that the potential interviewees knew him already and knew his position in the CABLE project it was a lot easier for me to agree on appointments. However, it might have affected to some interviewees so that they did not want to be very critical since they thought that being critical towards the donor party is not beneficial for them.

The amount of interviews was limited to ten since the amount is considered to be appropriate for the capacity of a master's thesis, and I managed to interview the ten persons easily before I had to leave the county. Also, it could be maintained that the point of saturation was reached to some extent since after eight or ninth interview there came up no new issues to large extent. However, in a study that aims to find out people's conceptions it might be that a total point of saturation can never be achieved since people's conceptions always tend to be personal.
The experts interviewed for this study are listed below. The numbers indicate to their comments later on in the analysis part. The names of the interviewees are mentioned since they are speaking as experts and can be considered to be willing to take responsibility on what they are saying as professionals. Also the topic is not too personal or sensitive so that the comments would need to be anonymous. The interviewees for this thesis were the following persons:

(1) Mr Kakune Kandjavera,
Chief Administrative Officer
The Association of Regional Councils

(2) Dr. Christoph Stork
Senior Researcher
NEPRU

(3) Dr. Ben Fuller
Senior Researcher
NEPRU

(4) Mr Muronga Haingura
General Manager: Finance
Municipality of Walvis Bay

(5) Mr Foster S.S. Mijiga
Country Director
National Democratic Institute

(6) Mr Pieter van Heerden
Deputy Director: Information Technology
MRLGH

(7) Mr Clifton Sabati
Development Planner
Institutional and HRD Development Sub-Division
MRLGH

(8) Ms Regina Ndopu
Director
Decentralisation Co-ordination
MRLHG

(9) Ms P.Erika Muundjua
Deputy Director
Decentralisation Planning and Development Support
MRLHG
As these persons are working in high government positions and have got expert knowledge on Namibian situation through their work and most of them have been involved in the CABLE project it can be well reasoned that they represent the best expertise on Namibian information society issues. The researchers Mr Stork and Mr Fuller who are working in the research institute NEPRU have not been straight connected to CABLE-project but Mr Stork has done a research on Namibia on the Information Age. His study has been referred to in this thesis earlier. He was considered to be a very interesting person to be interviewed since he had expertise knowledge about the issue. After interviewing Mr Stork he wanted to introduce me to Mr Fuller who had been influencing in the SchoolNet-project and knew a lot about Namibian Information issues. I was lucky to be able to interview him also while in my visit in the research institute. Neither one of the researchers is actually Namibian but they have been living in the country for several years.

Also the representative of the Office of the Prime Minister, Mr van Staaden is not involved with CABLE-activities. Mr Palander recommended me to try to reach someone from the Office of the Prime Minister since they have the final responsibility of the decision making and active involvement in information society development. I was lucky to get the opportunity to interview Mr van Staaden from the Department of Public Service Information Technology Management.

Mr Foster Mijiga is a country director in National Democratic Institute and he has been involved in the CABLE activities as other high level instances dealing with information technology, for instance The Institute For The Study of Digital Inclusion (http://www.digitalinclusion.net/mission.shtml) and he had done the baseline survey for the e-government "Capacity and Utilization of Information Communication Technologies within sub-national Structures of Government” for the CABLE project. (see p. 6).
Mr Muronga Haingura has been involved with the CABLE-project activities as well and he has done his master's thesis for the Maastricht School of Management in 2003 on "Local Democracy and e-Services: The Application of Information and Communication Technologies- the Case of Walvis Bay". Thus it is well reasoned that he has got expertise knowledge on Namibian information society issues. Mr Kakune Kandjavera is working in the Association of Regional Councils and has been involved in the CABLE activities. He has a chief position and thus he is well aware of what is happening in the administration structures related to information technologies. Ms Erika Muundjua, Ms Regina Ndopu, Mr Clifton Sabati and Mr Pieter van Heerden are working in the Ministry for Regional and Local Governance and Housing and have power to influence on information society policies and activities in the country and are well aware of CABLE activities concerning the e-offices for instance. They are also involved in business related to ICT development in the regions and have the knowledge of what is happening in the regions in terms of information technology.

All the interviews were done during March and April 2004 in Windhoek and took place in the interviewees' offices. The interviews were face-to-face interviews and they were recorded with a tape recorder. The interviews where all individual but all of them based on the same themes. The themes where formulated on the basis of the theoretical part. In the interviews the themes were discussed through with help of different kind of questions. (Appendix 1.) Most of the interviewees were very willing to discuss about the matter and regarded the topic important and current. The interviews lasted about 30 minutes each. I tried to keep up the discussion for at least 30 minutes. With some interviewees it was easy to discuss longer as with some it was very difficult to get the answer to each question to be longer than one sentence.

4.2. MODIFYING THE DATA

The interviews done for this study were thematic interviews. According to Hirsjärvi-Hurme the method can be chosen when the field of study has not been investigated widely and the answers are not predictable. Thematic interviews give the possibility to connect the answers with larger themes. For the interviewer thematic interview is a way
to ask more specific questions and get more specific answers than, for example, by sending out questionnaires. Thematic form of interviewing was chosen because it gives a great opportunity for the interviewees to express their opinions and conceptions. The subject of the thesis is a wide theme which can not be measured by specific questions but rather by discussion about the matter and thus the use of the method is reasonable. Discussion is the most convenient way to find out interviewees conceptions of the matter. Although the discussion in the interview situation was open, there were themes which guided the interview and thus the same themes were discussed with every interviewee. (Hirsjärvi-Hurme 2001, 35-48.)

The analysis of the interview data was done through the following steps: First, the interviews were written down. They were mainly written down from word to word leaving out any "hmm", "eh", etc. mumbling expressions. At times it was difficult get a hold on one particular word and those had to be left out. Mainly the quality of the tapes was rather good and writing them down was easy.

The second step was to read through that text and look for interesting details. I was also looking for issues on the basis of my interview outline. All of the interviewees had had the possibility to read through the outline before the interview. Some interviews went strictly according the outline while some interviews were more general discussion on the topic. Thus it was not that easy to get the answers straight from the text to match the themes of the outline. I looked for arguments, comments and opinions under the headlines in the outline.

Next, the answers were classified according to the themes in the questionnaire paper, as the following:

1. How does the interviewee define the concept.
2. What is included in the information society in his/her opinion.
3. How does the interviewee see the current situation of IS in Namibia.
4. Does he/she have an optimistic view about the IS in general.
5. What kind of opportunities does the interviewee see there is related to information systems.
6. What are the already achieved advantages.
7. Are there any unutilized opportunities in his/her opinion.
8. What kind of things in his/her opinion are hindering the IS development and what kind of solutions does he/she see there are to these problems.
9. What are the general developmental needs in Namibian society and are there any possibilities in his/her opinion that ICTs could help in these developmental needs.
10. How could ICTs enhance development.
11. How does the interviewee understand the concept of e-governance.
12. What kind of opportunities does he/she see related to e-governance in Namibian context.
13. How does the interviewee relate to the situation that IS and e-governance are models improved in the western world and they are imported as such to a new environment.
14. Has ICT changed something in people's lives, in terms of work, for instance.
15. What kind of possible impacts does the interviewee see there might be in the long run.

Further on the analysis was continued by modifying and combining these classes. In doing this, my aim was to find coherence in the answers and find answers to my research question; how do the local actors understand the development of information society in Namibia. Further, I see the understanding in this sense to be consisting of factors like challenges, opportunities, relationship between general development and attitude towards e-governance. The eight themes were formulated on the basis of my research question and further on the basis of the theories presented by Castells and Schiller. According to Hirsjärvi-Hurme the classes have to be well reasoned empirically and theoretically. (Hirsjärvi-Hurme 2001, 147). These eight themes that I formulated, best described the motives in my research question and also, they describe the contents of the interviews. In modifying the classes there was as a guideline also the study by Adam &Wood, they had classified the data in their research to “the actual impact” of the ICT, “potential impact”, “constraints” and “actions centred around users and their reactions”. I also used this kind of categories in the class formulation but also added some more classes on the basis of my theoretical point of view, as the conceptions of the imported models. In my research the actual and potential impact has been combined as one class since in my data they seemed to be very close to each other. This is because the local
actors did not see much already achieved, actual impact. The constraints in my research respond the challenges. The fourth class of Adam and Wood is not included in my research. I ended up in eight classes in my research:

First one of these themes is about local actor's definition of the concept of information society. This class combines the interviewees' explanation to the concept as well their overall attitude towards the whole issue. The second class concerns the conceptions they have about the current level of information society in Namibia. This was separated from the first class since the first class concentrates on determining information society on a conceptual level and it brings out opinions, the second class is more based on the facts the experts have knowledge in the current situation.

The third class was clearly a separate class on challenges the local actors see are slowing down or hindering the development of information society. This was the class which had clearly most information on it, almost all of the interviewees had most to say on this one.

As a counterbalance to the previous, the fourth class is about the opportunities that ICT could bring or have brought to Namibians' lives. In this class there was combined the already achieved advantages as the potential opportunities as well, since they seemed to be tightly related. Most interviewees expressed this by saying that not much has been done but there are such and such opportunities existing.

The fifth theme is about the way the local actors see the relationship between the general social and economic development and development of information society in the country. This was the second most discussed topic in the interview situations and there were lots of data for this one. Issues concerning the theme came up in other connections as well and it could be seen as a cross-sectional theme in the whole analysis. However, in my opinion it was clearest to be presented as its own chapter since there are such important issues that could better be emphasized if presented separately. This was a class that came to exist as when I read through the interview text, this was an issue brought up by all of the interviews, it seems that the other developmental needs are considered so important that they always had to be mentioned even the aim was to discuss about ICT issues.
The sixth theme is about e-governance in Namibia since that was the ICT field the CABLE-project was concentrating on and most of the interviewees had been within the actions of the project and they considered it as a good example of the functions of information society. E-Governance was mostly mentioned when the interviewees described their conceptual understanding of the information society itself and it could be argued that the interviewees saw the e-governance as a very strong issue in information society.

The seventh theme concerns the local actor's conceptions about the claim that information society is an idea deriving from the western world and it is an imported model from developed to developing countries. This claim was included simply because of my personal interest on the post-colonial development and also, the claim is supported by the theorists, Castells and Schiller, I have chosen to refer to in this thesis. Also, I have not found so much literature on criticism that Africans themselves would present about importing of western-world models and I thought it would be extremely interesting to ask them what they think about the views of Schiller for instance. Also, this was clearly its own class since it was so specific opinion question and could not be combined with other themes. However, this claim about importing western-world models is also a cross-sectional theme.

The eight theme describes their understanding of the cultural impact that ICTs have had on Namibian culture this far, about whether it has changed anything and what are the interviewees ideas about the future development. There were not much data for this category but I considered this to be very important since in the sociological literature there has been discussion about "new era" and "the new phase in our history; the information age". I wanted to present in this category the conceptions of the Namibian actors, how would they contribute to the discussion and how do they see the influence of information age on Namibian culture and way of life.
4.3. PRESENTING THE DATA

In the results chapter I have brought up mainly similarities in the interviewees' comments since in my opinion it was the best way to present the findings. Presenting the similarities brings up a red line or coherence in the issues and thus gives a better picture of the current situation in Namibia in my opinion. The other option would have been to look for contradictories in the text but in that case it could have been difficult to find any coherence or make clear conclusions or to compare the findings with the theories. My fear was that if I look for contradictories the result would be separate comments and no conclusions could be made. Hirsjärvi and Hurme describe the analysis phase to be also synthesis; the aim is to describe the phenomena as a whole and within larger context. (Hirsjärvi-Hurme 2001, 143). This was my guideline; to find out the larger picture.

Furthermore, the interviewees mainly brought up more similar issues and viewpoints than totally different kind of views. Thus it felt more natural to write the results chapter to describe the similarities. In general, it seemed that the views the interviewees had, differed in a sense that persons in the highest official level expressed more criticisms than those in the lower official level. The researchers and persons acquaintance with research were speaking at societal level, analysing the situation whole society-wide. Most officials were speaking from their professional point of view; at institutional level and mostly about what information society means at institutional level. Few of the interviewees spoke in personal level, mostly about what information society meant for them and what personal expectations they had.

Mostly, the viewpoint that the interviewees had on the issue, was rather technical than economical. In Finland for instance, the information society is mostly considered as an economical issue and probably in more abstract and conceptual level than in Namibia, where the overall developmental level of the country sets out the order of important issues. Information society is considered as technically relieving development rather than economically as a new phase in the development. However, in the Namibia Vision 2030 the information society was defined to be economically beneficial for the country and the strategy did not concentrate so much on the technical details. It could be concluded that
people rather expect something concrete technical equipment to ease their daily lives than speech about economical improvement.

What can be said about the generalisation of the results of this study is that probably not one of the local actors has understanding of possibilities and challenges of information society similar to other person. Thus, it is probably not entirely appropriate to discuss about their assumptions as a consistent group rather it would be better to give more space to individual views. However, there were many congruencies in the comments and a certain kind of middle ground could be reached. Also the amount of the interviews is not large enough to make generalisations about what the local masses in Namibia think. Therefore it can be maintained that the results introduced in this thesis mainly only concern the group that was interviewed. It is probable that the results give a hint about what kind of issues Namibians see there are related to development of information society. The study offers results for example about the challenges there are in the development of information society and how the people who have been influenced by the CABLE-project see the opportunities of ICT.

4.4. RELIABILITY

To get the people from the ministries and other organizations to agree to do the interview it was felt necessary to present the interviewee to be a student within the CABLE-project. It may have been that the interviewees wanted to give answers that supported the project because the project was a significant investor into the country's ICT systems. Also another fact which may have affected to reliability of the research is that the interviews were done in English in an environment where neither the interviewees' nor the interviewer's mother tongue is English. This may have affected to the answers and understanding of the questions in the interview situations and thus the validity of the research.
5. THE RESULTS

5.1. UNDERSTANDING OF INFORMATION SOCIETY ON CONCEPTUAL LEVEL

First of all, it was felt necessary that the interviewees defined the concept of information society. This gave direction to everything else that came up in the interview and made it easier to understand other comments as the way people determine the concept itself revealed quite a lot about their attitude towards the issue.

Many of the interviewees emphasized that the understanding that people usually have about information society consists only about Internet, but in reality information society includes many other things as well.

“ICT comprises quite number of issues, there is a misconception when people think about ICT then they are districited to only think about the Internet, this is the perception basically, but according to my understanding it goes beyond that, only other than just having the Internet, from my understanding is that it's a very important tool for communicating and through ICT quite number of things can be achieved, if one can just list down what one means by ICT then you are not districited as I said only Internet. You will have teleconferencing, telephones, email facilities, intranet, internet, videoconferencing all these kinds of things, so in the end of the day where it points down to it's a very important thing of communication, in that a lot of sharing of information, can be facilitated, through the use of ICT”. (4)

The sharing of information and people's ability to participate in discussions came up in many of the answers.

“Information society is, for me, is where there is in countries or offices or globally then, where we are sharing information through various media, through the printed, the radios, televisions, PCs and things like that. Information society is communicating through this instead of the earlier way of communicating which was like the face to face, in Africa we used to communicate quite differently, I must say. For us the printed media, the radios, televisions are something new, for us in Africa, because it’s not long ago we started, and now currently with the cells, and things like that.” (9)

“Information society is an online community; I see that countries actually establish information online, where people can participate on website.” (10)

Some interviewees' understanding of the concept included point of view of economical utilisation of information, such as information as a mean of production. It could be claimed that many of the conceptions about information society included a positive
attitude towards the new way of doing things and also stressed the start of the new era, beginning of something new. There were lots of comparisons made between the past, the era of “papers and walking into offices” and the information society, where information can be organised and distributed more efficiently.

“Information through technology, so for using technology you can access that information, organise it, in a much better way. Distance or time no longer become relevant or obstacles as they were in the past. That is how I look at information society.” (5)

5.2. CURRENT LEVEL OF INFORMATION SOCIETY IN NAMIBIA

The interviewees' conceptions about the current level of information society in Namibia were quite convergent: the level of telecommunication infrastructure is quite adequate for communication, and there are many initiatives to enhance the development of information society in Namibia. However, the use of ICTs is concentrated in urban centres and mainly in Windhoek.

Namibia has a quite adequate infrastructure for telecommunication. It was told that the country was in a way lucky since when it became independent and the telephone systems were updated, there were no more spare parts for the old copper wires available in the markets. The whole system had to be renewed and modern digital systems took place. Thus the country is well advanced to some extent. Nowadays almost every small village has the fiber active backbone drawn to them. Before the independence Namibians did not have very many connections to the outside world, thus, compared to the situation back then the country is advanced.

“In the capital we use Internet, all kinds of communications, and there is on-line banking and there are e-commerce- and e-governance initiatives So certain sector of the people in Namibia are already living in information society while many are completely excluded.”(2)

“We have some of these things I mentioned. We are communicating through these normal telephones, cells, the radios, and now that we have the satellite televisions as well... It is not spread out to the remote parts of the country but in larger centres, yes, you can communicate in Namibia.” (9)
Some interviewees mentioned that the infrastructure is there, but people just do not use it:

“It is there, so we would be doing a lot of our own. I would love to communicate with my municipality through that, to have my bills checked, to chat with people and a lot of the paper work to have done via this, to have my applications filled through, and things like that, and that would be even cheaper, I think, it would be cheaper, and saving of time for everybody involved, so in a lot of things where we still do things in the old way and not communicate properly.” (9)

The information stratification, which H. Schiller discussed about, exists in Namibia. People do not have equal opportunities to information access:

“I think in terms of level of information society, it is advanced in certain parts of the country and certain parts it is a bit backward. I think the basic infrastructure to support the information society is there, our telecommunication is quite excellent. When you look at this, however, the people are not able to access this in rural area or in offices because the costs are so high. Getting access to it is now only on organisational level. Although the basic infrastructure is there, they can link up to Internet, they can have computers, the cost for them to connect is quite expensive. I mean in most cases they cannot afford it. But I think most of the people appreciate that, the level of appreciating and the use of information society is growing, there is awareness being raised to that level.” (8)

The information stratification is taking place in Namibia because of high costs. It could be claimed that information has become a commodity. People would need to get access to information but they can not afford to it. Only those people who can afford are able to access Internet and computers and can get quality information and search for it themselves.

From the comments of the interviewees it could be clearly concluded that there is a digital divide between the capital area and the rural parts of the country. There is also a divide within the capital city, only some professionals and people belonging to certain organisations use ICTs. There is a divide between the private and the public sector. It was mentioned that the private sector is more advanced than the public sector in using ICT systems. For example the banking sector was claimed to be in the front line in using the systems. It was maintained that MRLGH is not even close to the level that the private sector is.

“Unfortunately there is no formalized use of ICT in local government. I’m giving an example, we are about 49-52 local authorities in the country but then we all have
different systems. If I take the financial systems we use, we all have different financial systems, there is nothing we can share.” (4)

Further on, lack of coherent policies leaves people unable to utilise ICTs. This fact was brought up in the study of Adam & Wood (p.5), and also Mijiga's report highlighted the same issue (p.6). In the private sector there are skilful workers and clearer ways to use the equipment and thus their prerequisites are better.

A major problem concerning the current state of information society in Namibia seems to be lack of purpose of the systems. The computers and systems are imported and implemented but it was observable in the interviews that local people did not have very clear purposes or context in mind where to utilise them. In communication, people are more familiar with the traditional way of getting in contact with someone:

“People are not using the new ways of communicating to a large extent. I think it is more because of the culture and the habits, because where it is now available it is not in people's inner way of communicating. If I want to have business with my colleagues, it is easier for me to knock there at the door, I stand up and knock there, and if she is not there I leave a note. You know, where as I could communicate through email faster, but that is a culture, that must be cultivated, that is really why it is not yet here.” (9)

Even though people might be aware the ways in which ICTs can be utilised, it might be that in Namibian society many of this kind of contexts are missing. As another example points it out, there are not even the basic daily markets where the systems could be utilised:

“Well, a good example would be agriculture where farmers might depend on market price. They could go to a local Internet place and find out current market price for meat, but before we get into that we have to get into situation where there are actually the markets. During Apartheid the blacks were denied the access to the markets. You have to create the markets before getting the information about them. We are in a phase right now that we are creating these things where information becomes valuable. “ (3)

As there seems to be lack of fields where ICTs could be utilised it might be reasonable to discuss whether this is because the systems where established in other countries, to serve some specific needs related in that other environment. As Adam &Wood highlighted the problems of implementing systems with donor support (p.4), the same issues seems to arise in this study. In the countries of origin ICTs have been a tool for something, organisation of work life for instance, in the situation of Namibia it seems that the tool is
imported first to the country and potential fields of utilisation are thought about only afterwards. The development seems to go another way around than it started in the Northern countries, for instance. The local actors maintained that Namibia is in the beginning of information era where everything is still in the process. However, it could be argued that it might be a bit complicated way to start using the equipment that are created for western world needs in an African society that is completely different by structure. As Adam & Wood maintained, the donor support might lead to underutilization of existing technologies (p.4).

However, some of the local actors were optimistic about the future:

“*The basic thing is that Africa as a whole is lacking behind. Africa as a whole has really not embraced the latest technology. But Africa is in a process and Namibia is not exception to the rule, we are in a process of taking these challenges of acquiring the information technology or the applications of that. We are at the initial state and if you take Africa and the Western Europe countries, there is disparity also. For us in Africa the idea is there but we are still in a process of acquiring the technology and the knowledge. It is a slow process and people need time to accumulate all this knowledge and we need to practise it. I'm very optimistic about it, there's no way you can run away from it, whether you are in Namibia, in South Africa or Angola, the trend the globalisation is taking place, there's no way you can run away from it.*” (1)

“So globalisation is really taking its root and I don’t think we will be excluded from that, we are part of the world so we can not be excluded from this. The only thing is that perhaps we should be active participants in this socio- economical development for the country and there for the world as such. We shouldn't be left behind and this is part of the efforts like the CABLE project is currently doing, educating.” (1)

It was obvious that the local people mainly think that information society is developed to Namibia in the future and that at the moment it is really not there yet. Much of the credit of developing IS in Namibia is given to the CABLE-project. Also the other existing initiatives were considered to be important proof that the information society will be established in Namibia.
5.3. CHALLENGES IN BUILDING INFORMATION SOCIETY IN NAMIBIA

The amount of challenges in developing information society in Namibia is huge. Challenges that came up in several interviews are lack of education, lack of infrastructure, lack of access and connectivity, high cost and people's attitudes. The results are very similar to Adam and Wood's research; the constraints that their interviewees mentioned were almost entirely the same that came up in the Namibian context. Also the points that Mijiga's report indicates are convergent with the results in this thesis.

The challenges can be classified to two main categories; on the other hand there are technical challenges that hinder the information society development in Namibia, mainly in the level of users. On the other hand, there is the wider societal context, the challenges that hinder the development of information society overall.

5.3.1. Technical challenges

Challenges that the users described to hinder their daily use or that they think are hindering the use in general are the following; lack of skills and education, fear of technology, high prices of the equipment, lack of content and the language barrier. At the level of users the challenges are bond to lack of skills, mainly. Lack of qualified human resources was the main constraint that Adam and Wood pointed out in their study and the same result came up in Namibian context as well. The users' skills and attitudes are bond together, it seems. When people are suspicious against the new technology they do not want to learn to use it. This technology fear is familiar in other places as well:

“It would be important to skill the users of the system to start understanding how the technology can actually help. For many of us over the age of 30 or 40 it means that first of all you have to get used to keyboard, you have to be assisted to get over the fear of this machine, you think that when you touch something you are going to delete the information. So there must be that awareness.” (7)

“Now this ministry is connected even through the video-conferencing and I tell you how many times have we gone there to have the video-conference, just sitting there and everybody is something like afraid or something like that, I think so, afraid, it is just an unfamiliar territory.” (9)
Further on, the technology fear and the lack of skills mainly derive from insufficient education on how to use the equipment. The CABLE project was thanked for raising the awareness among the local authorities, however it seems to remain as a challenge to get the ordinary people to use the technology. It was addressed that people in Namibia have very different kind of educational backgrounds so it will be challenging to educate them to become skilful ICT users. It was claimed that the education should begin at the primary level. Children will be the users in the future and there is an opportunity to get skilful ICT users when educating children but with adults it is more difficult and according to one interviewee it can even be seen as "only waist of time". Also, it was mentioned that it will take time in Namibia to get people to become familiar with computers and to get real benefit out of them, “not just playing cards with them”.

One of the most significant technical challenges is the high cost of the equipment and services. It is not only expensive to buy the computers and other equipment but also to maintain the systems and stay current. As M. Castells claims, there is a threat that developing countries face the digital divide in technical form, since it is impossible for them to stay current (p. 8). Expensiveness of the systems causes delays in repairing the systems and further on this leads to frustration and people might not appreciate the new technologies to large extent:

“IT personnel to support the maintenance of this infrastructure is quite a major challenge, you don't find enough skilled people in IT. And where they are there, we cannot afford to pay them for services. Because of that shortage we can not afford to maintain their services especially in a public organisation. So for me that is the biggest challenge, because you don't have them. Even people who have these certain technologies, once it is down they stop appreciating it because if you have to fix it up after three months or one year then you say let's just go back to the manual system of using things, we cannot wait. So this is a problem because most of them have reliance to services to come.” (6)

In addition, lack of local content in local languages in the equipment is a technical challenge. Furthermore, the reason for the implementation of the ICT systems in Namibia should be that the systems are supporting local needs and there should be local content related to these local needs. However, on the basis of the interviews it could be claimed that not many people are aware of importance or possibilities of local content. There might be a great danger for many to forget the actual local needs and start implementing
something western-world-like. (cf. p.11-13.) "Specific African solutions" need to be created to the local users:

“We have already ways to do things in African context, we need to do research and look at how can technology help a community to achieve objectives, in indigenous way, how can technology address health. You might find that you don’t need fancy technology, you might find out that today, cellphones are more widely used here as in some parts of Europe because here we have problems with the other networks and infrastructure. So what applications, how do we use this as a tool for information society. Maybe even before we get to the PC, how do we use television, how do we use television as a tool for information society, so we need to do research and identify specific African solutions that are based on African strengths, realities and that sources that we have.” (5)

“I think a lot of research needs to be done. This is what happens at the moment; there is a product, a product comes out from America or from EU, it is used there and it works there and it is brought down to Africa and it is expected that we use that in Africa. I give you a simple example, if you look at Microsoft Word, if you look at word processing, the word processing was developed there, it came here and it is supposed to work. But it is all working in western languages, it is all in English. How can we look at developing content that is local, how software is developed in local languages, so we have to do some research.” (5)

Besides the lack of content, the web pages should be created in Oshiwambo and other local languages as well. This would enhance Namibia to become an independent actor. What the donators should keep in mind is that importing of computers is not enough. There needs to be put content on local languages on that imported technology. Luckily, the SchoolNet project is already putting up the software in the computers it has installed, it was told. Without proper software the computers would not be useful for the pupils. It was mentioned that putting up the software is even more important than actually bringing the computers there.

Further on, it was argued that the already existing computers should be utilised to larger extent. It was argued that for example the e-offices that have been implemented by the CABLE-project should be used more efficiently. It was claimed that some people do not understand the connection between their own work and the e-office but run the e-offices like Internet-cafés and not as a useful tool as they could be. One reason for this kind of shortage was suggested to be inadequate training related to establishment of e-offices. It was also maintained that maybe the person who introduced the e-office emphasized the communication through computers and did not take into account that the people whom it
was introduced “are not even able to write weekly reports or keep record of their financial things by computer”. There should have been more training related to the possibilities that computers offer, it was claimed.

5.3.2 Societal challenges

The overall challenges that the interviewees described that are hindering the development of information society in Namibia are the following: lack of access for the rural people, lack of coherence in the government policies, importance of other developmental needs.

A huge challenge in Namibia is to get the access for the rural people. This was also mentioned in Adam and Wood's research. In Namibia, the division in access to ICTs between the rural people and the people living in Windhoek is tremendous. The size of the country is an important fact affecting to access and connectivity in rural areas. People are scattered in the rural areas which makes it difficult to reach them and also, they are poor and thus do not have opportunity to get any equipment. In addition, it was mentioned that probably the computer services will not be offered to large extent in the rural areas since people are not ready for that in infrastructural or skill level:

“The people in the rural area, they don't really have access or knowledge of how to use a computer for instance. So even if you put up an Internet café they probably won't use it because they don't know how to use it. They don't have access to telephones, they live in kraals1 and they don't even have electricity in most cases so most of the population they don't have access to services and that is when you have to start asking yourself how, those are some of the people that they have to implement some of the services for, but will they ever be able to use them. And if you ask yourself that question that will also have an impact on to what extent the services and computers will be available.” (6)

Moreover, not all people in Windhoek either have the access or are interested in using the equipment. Some of the interviewees claimed that the use of ICTs, the Internet for example takes place only in organisational level in Windhoek. However, in organisational level there are also negative attitudes towards the technology:

“It is also this hierarchy of ours, because sometimes maybe we are talking about it in lower level, we are having the exposure to that, but when you have to make the people aware who are above you, the decision makers above you and there it becomes even more difficult, because people are in the first place older, they are not really exposed to

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1 (Afrikaans) a fortified village of mudhuts or an Ovanbo homestead
that, they are not in it. There are people who are maybe not comprehending how useful it would be.” (9)

A societal challenge is the government policies over the ICT issues. Many of the interviewees mentioned that a big challenge in Namibia's way towards information society is the government itself. The government does not have convergent policies for ICT issues. People in the ministries are not aware how they should implement and plan IT strategies. It was expressed that more clear instructions should be given from the Office of the Prime Minister. In addition, the Namibia Vision 2030 maintains that the first thing for Namibia to do in order to be able to act in the information age is to create a coherent ICT policy. (The Namibia Vision 2004, 80).

Government is also hindering the information society development in a sense that it has a monopoly in telecommunications, power supply and other areas as well. As the government is getting the economical benefit from these fields, it is actually hindering development by keeping up high prices. If there were more competition the prices would come down and the level of services would improve. Also a problem is that all the computer companies are centralized in Windhoek, this makes it more expensive for other areas to get the equipment. There are also some companies in the Walvis Bay and Oshakati but in the southern part of the country there are not any. All the services need to be provided from Windhoek.

The government was also blamed for short sighted planning and lack of sustainability. It was argued that the systems that Namibia has do not have any backup or support system and this means there is a risk of system failure. It is because lack of competition and lack of planning and knowledge. The consultants from other countries and corporations come with their plan, and sell it without caring the impact of it. It could be claimed that this kind of problems are one of the most significant expressions of the power relations between the developing countries and markets of western world.

“\textbf{The thing is, there have been a lot of cases in Africa where people were trying to implement systems and most of the systems have failed. Success has rather been an exception than a rule, and the main reason for that is that people in Africa don't really look the sustainability of the system like that, they design a system that doesn't really do what they acquire or they buy a system from somebody. They even talk very well, you get these guys who can really focus on some point you need, they can actually identify what...}
you want. And they tell you this system is what you need, the government buys it and implements it and it doesn't work for them. For a pure simple reasons that it is too expensive, it's too hardware intensive, and the system doesn't provide the outputs that is required to make decisions. And then the system fails, but then you have bought the system and it is implemented and Africa is all right with it. And because the technical expertise is not really in the country and there is a lot of consultancy, the consultants are looking it out of their own perspective they are not really looking what this government requires and do their part to make the government better. Most of them just want to sell their product.” (6)

Namibian government was blamed to choose products and services which can only be provided by one company. This had happened for example with financial programme. It was seen as a challenge that the same thing does not happen with ICT systems and e-governance projects as well.

Further on, another problem within the government, which affects the overall information society development in Namibia, is that many of the ministries are understaffed.

"The government has bettered salaries and renamed positions but the problem is that there are actually no sufficient human resources available for IT planning and organising. In that situation the strategies that the government has been using are inadequate. The people who are in IT sector are mainly working for the private sector. If the government tries to pull these people to work for public sector then it is only creating a gap to the private one. Consequently, what should be done is to educate more people at the University of Namibia and at the Polytechnic." (6)

However, this again is not simple. More resources are needed to implement efficient education system.

The third main societal challenge in Namibia is that there are other things more important than developing information society. Other developmental needs are considered to be more important. This was also emphasized in Mijiga's report; there is low priority for ICT after other developmental needs. In addition, it was mentioned that “people do not eat information”. However, this was not expressed as a critique towards information society in this context but rather as a challenge that has to be overcome.

“People are struggling with basic needs, food, health, water, how do we make sure that information society becomes a real tool for development, not just for some fancy gadgets for elite but tool for development that is a challenge”. (5)
H. Schiller emphasized the fact that it is a challenge to get the equipment to serve the humanitarian needs instead of it being only owned by the elite. In Namibia the attitude of consumption seems to be acquired by the elite already and also the professionals in Windhoek own high technology, they are enjoying the “western consumption standards.”(p.11-12.) ICTs was blamed not to be on the top priority list of government because people do not understand the benefits that it would bring. However, in the Vision 2030 ICT is among the top priorities in the country's future development areas.

“Unfortunately ICT as we see is not on our top priority list, government has been really slow to take up ICT, I mean there was initiative to implement intranet government but that's only Windhoek phase. That was already in -97. The regional extension hasn't taken place as planned and the money was addressed to other areas more important. The private sector they are out for personal gain, if they would create some sort of society its more for the markets, that does not take place either. So there are little islands all over, there's more in terms of service provision, not in terms of actually interacting and communicating. So I think we are still far to go. People are encaged with other activities than doing this.” (10)

As a great challenge for the country, related to other important needs, it was mentioned the decision whether or not to invest on the IT systems now. If the systems are not invested on now but after ten years then the other countries are far more developed and it will be even more difficult for Namibia to reach them. If the investments are done now then the government might be accused for not prioritizing people's needs.

5.4. OPPORTUNITIES OF ICT IN NAMIBIA

As in Adam and Wood's research, the opportunities that ICTs would bring did not come up as many as the challenges. In Adam and Wood's research the actual and potential impacts were separated to different classes. In this study they are in the same category since the development of IS is only in the beginning and people did not recognise that many already achieved advantages but rather mentioned potential opportunities. Many of the opportunities that came up in this study were related to the crossing of geographical distances, improvements in education, business and service delivery. They are very much similar to the outcome of Adam and Wood's research. In their report it was claimed that
the actual impacts have been made possible mainly by external donor supporters. The case seems to be same in Namibia, as many interviewees referred to SchoolNet and CABLE-project in relation to actual impacts of ICTs. In this chapter I have also separated the answers to technical and societal classes, since the data was clearly distributed to immediate opportunities how ICTs would ease people's lives technically and on the other hand to societal opportunities that would in the long run enhance social wellbeing in Namibia.

5.4.1. Technical Opportunities

The SchoolNet project is creating opportunities for people to access education. Internet facilities based on free software and solar power allow the pupils in far distances to participate in teaching. Teacher shortage in the rural areas can be influenced. The teacher could be in Windhoek for example and give lessons via Internet, utilising email for example. Also many of the schools lack good libraries so Internet would be a helping tool in the matter. This kind of use of ICTs will provide more equal access to education for all. As the Apartheid system left big differences to people's level of education, ICTs could be one opportunity to change the situation, it makes the lifelong learning possible and thus the people who did not have an opportunity to go to school back then, could now educate themselves.

One interviewee said that the CABLE-project is one opportunity because it is disseminating all the ideas of e-learning and e-governance. The project is also the main creator of ICT based systems, it seems, in some of the local actor's conceptions:

“In the future the ICT practices will change, I think we have already started embarking on this in quite a number of organisations, for example CABLE, they came up with e-learning, e-governance, all these types of things, so I think quite a number of work has been put in place already. But to me it is still in the initiatives, people must now first understand what is ICT, and secondly move forward to see but what benefits can we derive from ICT and then thirdly, let's do some investments in ICT, then from there to implementation state will then improve provide benefits that we can achieve through ICT.” (4)

Other technical benefits that have been achieved through ICT were mentioned to be, for instance, cost savings. As the geographical distances in Namibia are great, ICTs obviously ease communication and thus provide savings in costs.
“In a place in North-East Namibia, two years ago it was 300 kilometres to the nearest telephone. Now that there is this tower, they save petrol, money and time, because driving those roads, it is a six-hour trip one way. So if you wanted to make a phone call you probably had to take the day off from work and buy lots of petrol just to go there and come back.” (3)

The videoconferencing in the ministries was mentioned in several interviews and it was understood to be a major technical opportunity in the ministries that is already in use. Officials do not have to travel to other areas but the meetings can be organised virtually. Obviously time is being saved when people do not have to travel hundreds of kilometres because of one meeting.

There are some technical opportunities that are not yet used, for instance the existing cables are not utilized to the extent they could be. An example was mentioned that in the field of health care, pictures could be sent from rural hospitals to Windhoek, where the specialists are, for doctors to assess the cases. Currently this is not done because there are not enough skilled people.

As ICT makes communication cheaper to abroad as well, it was mentioned that through videoconferencing one could keep in touch with relatives in Germany for example and via Internet get information for research from Europe, USA and Asia. Also, costs can be saved by using Internet for free information. The free information might provide, for example, a solution for a health problem.

Further on, technically ICTs could ease Namibian's lives in data recording:

“If you currently look development purposes, if you look Namibia is having a flood in some of these northern parts, north-eastern part of the country, getting access to these people is very problematic in this needs, therefore, information society plays a role where you can use certain basic equipment you can solve out how are their conditions, how are they living, because vehicles cannot go there, neither boats can go there nor humans can go there. So simplified information can play a major role in communicating where they can get support where they are placed. So get information on the conditions where government can help them. They can get information on where there is no access. That is where information can play a role in solving problems, of these rural people.” (8)

ICTs could help in keeping record of HIV-infected people or food resources as well. This would help the government to plan policies and aid programmes and to address the aid to right targets.
“as you can start creating a data base of what is required, you know have got your emergency management units that distributes the food to people that are dying of hunger and you now which areas are the problem areas concerning food and food shortages. so that information you can keep in a computer is available for a push of a button and if these systems are interconnected between different regions you can immediately inform another region; listen we have got a problem here do you have some food available, and you can actually share resource between the different areas that is the great thing about information technology. And you don't really need to go to pick up a telephone and call a lot of people, information is available on the page and that's where IT can really start working for.” (6)

5.4.2. Societal Opportunities

There were some opportunities mentioned that would in the long run have an effect on Namibian society and social and economic wellbeing of its citizens. Those were electronic business, electronic governance, education possibilities, and openness in the politics.

According to Nulens et al. e-business is one of the biggest opportunities for African countries (p.20). It was also mentioned in Adam and Wood's research as a potential impact. Some interviewees maintained that electronic business is the biggest opportunity in the future for Namibia as well. However, that has not been really started at all and one reason for that is lack of legislation. Through ICTs new trade partners could be reached in a wider area and this would also create more jobs for people if the markets were bigger. One opportunity that there was mentioned is that tourists can get information about Namibia through Internet. Tourism has an increasing importance in Namibia and there is a great business opportunity; to attract more tourists through web pages. Also any organisation or company would easily get information about the conditions in Namibia through the Internet and that could increase business opportunities.

The second societal opportunity through the ICTs is that the government could function more efficiently. For instance, the service delivery could be improved through utilisation of ICTs. People would not have to stand in a queue that long anymore but they could for example renew their passports electronically. People would get the services more efficiently and people working in those services could also do their work more efficiently. One of the good sides in electronic services is that they are available always,
not only when the offices are open. At the moment the services available in some of the municipalities are payment of water and electricity bill via Internet. Some other services could be offered via Internet. However, there is long way to go, since the existing government service delivery does not work efficiently and transformation to electronic based services would be a huge process. One of the interviewees actually said that he does not believe that there will be much of the electronic services available in the future either.

It was claimed that in politics ICTs could be a very helpful tool. Since SWAPO is the ruling party in Namibia Internet could give an open arena for other people than SWAPO supporters also. It was claimed that by this way ICTs would enhance democracy and decentralisation. Also Adam and Wood mentioned as potential impacts the fact that individuals could be empowered and decentralisation can be enhanced through ICTs.

Another opportunity of Internet would be that it is an open forum where people can interact. It was mentioned that especially people from different cultures can come together and share their differences. In Namibia where there are different ethnical groups this might be a very good ground for increased communication between the groups.

According to one interviewee an opportunity for Namibia in ICT would be that through ICTs information can be spread about the poverty in Namibia and when people in other parts of the world receive this information they might want to donate to Namibia and thus the poor people would get benefit out of ICTs:

“How can we having the situation of poverty, how can we implement ICT and maybe at the same time uplift the standard of living of the society. That can be done through ICT as well, if we are focusing, somebody who has never heard of Namibia they see that oh, where are these things happening, are people really that poor, and that will force those people to come down and say I want to see it myself and if they come they might try to implement project that will relief these people and in the end they may be better off than what they are today. And I think that is the important factor that one should build in, yes we have the poverty, maybe through implementation of ICT we maybe able to have these people relief.” (4)

The opportunities that came up in the interviews were very similar to ones that were established by NEPAD (p.21), and Nulens et. al (p.21). The opportunity that was mentioned most in the interviews, was achieving access to education in rural areas. The
opportunities related to business did not come up that many. However, in the vision 2030 the e-commerce was concerned as the biggest opportunity for Namibia, since by utilizing e-commerce the country could become an active participant in the global markets.
5.5. RELATIONSHIP BETWEEN GENERAL DEVELOPMENT AND ICT

The general developmental need in Namibia, that the interviewees most emphasized, is development of basic infrastructure, such as the water and electricity networks and roads. There is a division between the urban and rural areas in terms of basic infrastructure and especially the rural water issues were considered to be important. The health issues are a remarkable need and the development of education. Poverty in all forms was considered as a challenge for development. Further on, many of the interviewees emphasized that since there are many of these basic needs unfulfilled, they do not consider the ICT issues as important as those.

It was claimed that one only needs to go twenty kilometres out of Windhoek when there will not be any kind of basic infrastructure. This leads to a situation where everybody wants to come to Windhoek because of the urban services. Also, it was claimed that the situation is not even coming better in the rural areas since the infrastructure development is very expensive. People in the rural areas are affected by health problems such as AIDS and economical factors such as poverty and unemployment. It came up in many interviews that people in the rural areas want clean water, sanitary, health services and basic education. Not all people even have the radio and there are some parts in the country where radio does not reach. There are also areas in where there is no electricity. However, it was said that the government is having an electrification programme on the countryside and tries to improve the situation.

“There are many needs for people in the rural areas: do the people in rural areas have running water, do they have taps, if you are talking about really extreme people who are actually getting water from the river. One could also say easily well if you going to take this technology, is it going to help them, may be not, right away. We can also ask are the people in rural areas going to be assisted, do they have flush toilets for example, do they have bathtubs, no they don't. Are there brick and cement schools in rural areas, you would like to see, no. Some might have, some might have temporary structures, but within that community, would the technology help in, again the question is electricity, the lack of electricity, would you be using it, you might probably not. So there are other questions that actually are more important than these of ICTs. So you could maybe address your effort to lobbying it, to get electricity, to get them permanent structures, to get them books, ensure that they get qualified teachers, and that way you could introduce
information management system, and the information system using computers, and Internet and that would probably be the way. But if you ask me, the person who is in the rural area in Kunene, will this help him, and do we really want this to help him? Rural areas, I'm thinking of villages like in Caprivi region or in Oshana, it would probably not be the time now.” (7)

In addition to the other needs that are pushing information society aside, one of the reasons for being negative about information society development is the fear that ICT would take jobs away from people, since the country is having serious unemployment problem which can be considered as general developmental need.

“Now if you go and just try to implement ICT people will not regard that as a priority, because economically people's mind are like let's rather have poverty, unemployment and this kind of things in place before we can really talk about technology. That is the thing. The fear of, if we bring in computers and then the computer will replace the work of ten people then in the end we will have unemployment increasing because of the introduction of IT. So there is also the fear in that respect.” (4)

Considering the opportunities there might be for Internet as a tool for development, there arises many important issues related to that. First of all, people need connections. In terms of connectivity, not only are computers expensive for the people, but people are also scattered in the countryside, so even a common spot or place for computer access would probably not reach that many people. When the connectivity is there the next question would probably be the content, what kind of information the rural people need and are willing to use:

“The challenge in that is to how to reach those people, because there is no connectivity, so this is what needs to be done first, lets have the connectivity there before we can talk about what we want them to reach for, that will be the bigger challenge. And even bigger is to how to do the set ups because these are very poor people, now obviously they will not have afford to have computers and things like that. So somewhere along the line the decision will have to be made, and say this is how we are going to implement it. And also the reality is that in the city people are more concentrated where as the people in the rural areas. They are very far scattered and that is very difficult to reach them. But obviously there could be a way out, you can have a central point where by people gather together every now and then to access information, that would be a very good thing rather than reach them individually, that will not be possible in the near future. So to establish a central point make them aware that this is what we can get and through ICT then you can have all the set up facilities there. “ (4)

It was maintained that since the infrastructure development is rather slow, people in the rural areas could receive information that would help them in their daily lives through
mobile phones. That could already be done. Furthermore, it was emphasized that the rural people would probably consider being on-line more significant if their needs would be taken into account. In addition, they need education on how the technology works, what kind of information they can achieve and there needs to be appreciation against that technology in order that it will be taken into use. After this, there will be some use for that technology in the rural areas.

Further on, it was suggested that a way in which ICT can enhance development would be that if government officials would use emails and other electronic messaging instead of making phone calls, a lot of money would be saved and then this money could be used in important targets like water networks. It was claimed that in that case you can not say other needs are more important than ICTs because it is a question of relevance, it depends what kind of technology you use and to what purposes. Also, if the technology can help people, if there are right kinds of applications available for the people in rural areas then one should invest in ICTs, even though people in the rural areas might be expecting first to get water and such.

As mentioned in the chapter about the challenges, one of the major developmental needs is the lack of education and lack of human resource. That further on has got impact on implementation of health care and other fields. The current level of education derives from the history, the Apartheid era.

“Apartheid system left 90 percent of the population undereducated for forty years, seventy years and those who were not negatively affected by the apartheid system are living in a world of not enough competition, not enough people on the A-level, very few people have gone abroad to make the PhD or qualified themselves in that political environment. So education is certainly the biggest challenge for Namibia and only when people are educated they can deal with AIDS, only education can affect on AIDS.” (2)

“IT will greatly play a big role in education of our people, it will also expose them to global challenges. It will also secure and insure that democracy, human resource development, and socio-economic development will be enhanced through the IT. So the acquisition of IT will greatly play a role. And it will only be through the commitment, the political, administrative commitment from the part of the government and all the ministries to ensure that this process is evenly distributed to all the regions of the country.” (1)
Again, another developmental need for Namibia is the increasing urbanisation. At the moment the government is concentrating on decentralisation programme which is expected to improve the basic infrastructure in the rural areas. The decentralisation concerns decentralisation of power, responsibilities and financial planning and management to the regions. Further on, this should bring the facilities to the rural communities. Some say that the gap between Windhoek and the rural areas is only widening because development in the rural areas is very slow and many people from the rural areas are moving into the capital. The decentralisation programme is supposed to slow down urbanisation. ICT can help in decentralisation process since the communication and task sharing will be eased by utilisation of ICTs.

Furthermore, a developmental need can be seen to be dependency on development aid. Although Namibia is not dependent on development aid to extent many sub-Saharan African countries are, it still is receiving quite an amount of developmental aid and uses this aid on several different sectors. However, as it came up in Adam&Wood's investigation, development of society with foreign donor support is problematic. Although they discussed about information society, it could be said that the same challenges are related to all kind of development with donor aid. In some of the interviews it was claimed that even though the intentions are mostly good one needs to be careful about how to implement the aid:

“There are a lot of good intentions, people who want to bring computers, support and bring development but you need to be careful how to do that. An example, there are projects that have a budget and then they say we can only buy ten computers but they are looking for Pentium 4s, the fastest computer on the market, why are you looking at Pentium 4, what are you going to do with a Pentium 4, for accessing the Internet, cheaper computer would achieve the same objective, a lot of resources are being spent on fancy technology and that should be looked at seriously. When Primenet came the idea was good but it was very unrealistic, does everyone need a fancy computer, maybe not, we might find out that we can provide more computers to more schools but the tendency is to buy the biggest fanciest machine, most expensive and then we say we don't have money because we look at the most expensive computer.” (5)
5.6. ELECTRONIC GOVERNANCE

The local actor's conceptions about the state of electronic governance in Namibia were mostly sceptical. It was argued that the whole thing is still in initiatives and the comments of the matter were hesitating. In the interview situations it was difficult to go on in discussion about e-governance since the interviewees mainly did not have much to say about the topic. However, there were some opportunities recognised in electronic governance.

The electronic governance is in the level of initiatives in Namibia. It was said that work in ministries is still done in the “old-fashioned” way.

“I think in sub-national governance we have started e-government strategy of development, national level I know the office of the Prime Minister is also working on a national e-government strategy so I think in that it is already in the level of these strategies. Our own vision 2030 stipulates the issue of information society quite clearly.”

(8)

The existing facilities were told to be Parliament on-line site. However, it was claimed not to be in use very much. There is only frequent communication and this was claimed to be because most of the people in Namibia do not know how to use Internet. But e-governance was claimed to be taking roots in Namibia because there are workshops for the officials and people are talking about it.

“Well, they are trying but they have ways to go. They put up things in their website in Parliament and they are trying to get the mobile bus that goes around and people can use it, but they still have ways to go. I think ultimately they are starting to realize it is cheaper to be sending emails opposed to faxes or letters. They are just getting into it.”

(3)

It was claimed that there is a long way to go before one can speak about e-governance in Namibia. The government is at the initial stage of building the systems and acquiring the basic information about the matter. It will take time before the citizens actually can participate actively on decision making.

It was claimed that the Finnish supported e-governance strategy and the Information Technology Policy for the Public Service by the government of Namibia are initiatives
that are essential in gaining knowledge about electronic governance. Further on, people need constant education to get used to the idea of e-governance. The concept is new and people need time to adopt it, it was maintained.

There were few advantages recognised in electronic governance. e-Governance will, like ICT in other applications as well, save costs and time, it was maintained. Also wider audience would be reached in politics because currently only some privileged people have access to information what is going on in the country's politics. In addition, e-governance would open the discussion forums for dissenting opinions.

“In traditional model of governing there is always some kind of fear of people of unknown. If I go to a meeting and there is a person speaking from a political party or from the government and I want to oppose that, I might fear that I might be victimized, but with ICT you are free to do whatever you want. You are free to mobilize for your concerns, mobilize your group and tell them let's get together I don't think that is a correct approach. And also it will not restrict you in the boundaries of countries, your own country, you can mix up with people elsewhere and that is the dynamics of ICT. “ (4)

Von Haldenwang claimed that in this kind of situation where new kinds of models are introduced, the ruling party in the traditional system might experience the new system threatening (p.24). However, in the interviews there came up no comment referring to this kind of threat even though the ruling party is having a strong position in Namibia.

Further on, some groups can learn from political groups of other countries how to proceed in a certain issue. It was said that for example women, if they want to have an impact on something, they can learn from other countries' women groups how those have achieved the goal:

“So if for example women feel they don't fill up enough places in government via ICT they can do research on how this country achieved these things, let's learn from them. They can pick up a lot of information that they can also apply to their own situation. With the traditional way of governing it would be difficult to get that. Because traditionally you are only bound to your own constituencies like Walvis Bay, its only Walvis Bay, Windhoek is only Windhoek but through ICT you are open to everybody. I'm sure if this can be implemented a lot more can be achieved than what you gain through traditional way. “ (4)

One interviewee said that the good governance should already be in place and then ICTs can be used as a tool to maintain it and to communicate and deliver services within it.
That was the only comment related to principles of transparency or inclusiveness that are some of the main aims of e-governance (p.23).

From the part of the local authorities it was claimed that people have not fully understood how to utilize the e-offices entirely. It was claimed that the e-offices have been running like Internet cafés. Some real information should be offered for the citizens about the public services and working of the ministries instead. If citizens would have this information online they would not have to make appointments to meet people to find out these things. It was suggested that in addition to the information, there could be service payment forms available in the Internet.

Special challenges that the interviewees mentioned are first of all, the small population rate of the country. This means limited resources to implement e-governance. The interviewee claimed that external funding can be used to build up the technology systems for e-governance but the problems will arise when the systems need to be updated and maintained. So sustainability of the systems is essential challenge.

“Most of the municipalities are too small to do electronic services. So I don't know to what extent e-governance will be exported to Namibia. We are busy with the strategy. That will basically be seen only after the strategy will be completed and once we have started the implementation; to what extent it can be implemented. It will require financial resources, technical expertise, but it can work for Namibia.” (6)

The government's activity was once again criticized:

“I would not say that much has been achieved in terms of electronic governance, for my knowledge we have the government has set up a web site, but then again to what extent the government has gone to explore and inform everybody about the facilities, what is actually behind the introduction of that website. I don't think it was done. Those who know they only know that it is there but what is the use of that. So it has just been put there and I think they feel we have done it.” (4)

Instead, the communication should be communication to both directions, from government to citizens and vice versa. There should be a forum where citizens could see what kind of decisions have been made and then the citizens should have opportunity to give feedback about those. As mentioned earlier, in referring to von Haldenwang (p.25), there remains the question that who will benefit of the systems in the end, the citizens or the governing elite. It seems that there is a long way to go in Namibia for the situation
where citizens actually benefit of e-governance. However, at the moment the government is not also obtaining great benefit of the systems since they are in the initial level. Further on, it could be maintained that special care should be taken to actually make it possible for the citizens to affect on political debate.

5.7. CONCEPTIONS ABOUT IMPORTED MODELS

The conceptions of the local actors were asked about the matter that information society systems are inventions from the western world and the application markets are dominated by the western world corporations (cf. p. 11). It was asked what kind of relationship they see there is between Africa's development and the western world dominance.

The main respond was that all the development has come from the other parts of the world into Africa and that is how Africa has developed. It is the same thing with information society and technological implications; they should be taken into use because they might enhance the development. It was claimed that the colonialists brought lots of development when they came, like the literacy. Now there is this technology and it should be implemented in Africa. There were only few interviewees who said that there is a relationship between the western world capitalist markets and implementation of information society in Africa or Namibia. Most of the respondents claimed that there is nothing common with those two.

One interviewee claimed that information society is opposite to capitalism, because in capitalism people are controlled by the capitalists but in the information age the information is an asset and that gives the power to the people. As a solution to the current situation in the application markets the open-source software was emphasized.

In addition, the argument of information society being a form of western dominance was argued against by saying that Internet is a tool that Africans can use the way they want. Like SWAPO used telephones and faxes as an important tool in the liberation struggle, Africans can use Internet in a way they want and not being controlled by the West. What is really important is the content that makes difference.
“You can not really say this is another type of colonialism when you are actually benefiting from most of the stuff that comes from there, if you don't want to use it, don't buy it.” (6)

“I think the only reason why people are saying things like that is because ICT is coming from the developed countries, brought to Africa. Let's see how we can use it. That is the mind change, it is difficult like any other change, when you want to bring about a change, people are more resistant, they don't want to change and there is the fear of what can possibly happen. They will have to come up with realities. I wouldn't regard it as colonialism, colonialism was to down press you while ICT is actually opening up that you can see what is Africa doing, what is Asia doing, what is America doing, I would not agree this is a type of colonialism because you have much more freedom, even freedom of expression, you can say what ever you want. I will put something there and I will get support from there. It's much more transparent than the traditional system not using ICT because all decisions will be open to everybody.” (4)

One view was that all development trends that are already there they should be taken into use and Africa should not reject them but just take them and “embrace” them.

The opposing view was presented to some extent; by becoming a participant in information age Africa is continuously under western dominance. This is affected by the fact that Africa has been colonized for centuries and is a weak continent. Now as Africa is trying to connect itself to information age it is a ready market for big transnational companies. It was claimed that however, the western world countries are struggling with the same companies and monopolises as well. So what would be important for Africa is to have its own inputs in the system and thus get some benefit out of it. Also, it was maintained that the meaning in which ICTs are used is crucial, if electronic governance for instance is used to impose western world rules then it is wrong but if ICTs are used to improve local needs then it is different. The CABLE project was also criticized in some of the interviews:

“I don't have a problem with that, and I want to learn, something that has worked in Finland it could work here as well, but it could it doesn't mean it will, so there is nothing wrong in bringing a model from somewhere, we should learn what others have done and adopt it for our own Namibian situation. Most of the times we should not allow technology decide, we should look at the needs and see how technology can address that need. So CABLE, it is good thing that we are learning from others like Finland but we need to be realistic and see how can that work in Namibia, we are ready to change it, we are ready to modify it for the Namibian scenario. I don't think that some of the CABLE project did that, they should have done that. Primenet is an example, the Primenet as a tool is not realistic, it is a very expensive tool I don't know if it works in Finland but it is not working here so it could have been done differently.” (5)
“The Primenet tool is dead already I don't know anybody who is using it really, maybe there are some people using it but it is most dead even before it came alive. If you look at the strategy that has been developed so there are different pieces of the CABLE project the one that has failed is Primenet, it has calendar, intranet you have all these and what is the relevance of that?” (5)

According to one interviewee it is important that the own culture, the local one is well-known by its members and they appreciate it and then ICTs could be used as an assisting tool in ones own cultural context. ICTs should not be allowed to change anything to more western world kind of approach. Moreover, the technology should be first linked to local perspectives and aims. However, that was claimed to be problematic. Also if the local perspectives are not taken into account it might happen that the new technology that are introduced in some organisation might be experienced strange and people will not acquire the culture of using them. This might happen if people are forced to take the technology into use, it was claimed. It can be concluded that the conception that the interviewee had is that the idealistic situation is where nothing has to be changed in ones own culture while taking new technology into use. The interviewee emphasized that it would be important that people in Namibia would still “come together” to discuss about things while ICT would be an assisting tool in communication when the person is not available for direct communication.

To conclude, critical thoughts towards imported models were presented only by few interviewees, the majority maintained views that Namibians are controlling the development of information society themselves and are not exposed to domination of developed countries.
5.8. SOCIAL CHANGE VIA ICT IN NAMIBIA

ICT has not had very big impact on people's lives and it has not changed very much in Namibian culture. This is mainly because the number of people having access to Internet and other tools is so limited. Mainly it has had an impact on people who have started using the technology in their working places daily. Furthermore, some of the rural people have got access to telephones via wireless systems and for them it has made communication easier. Otherwise, people in the rural areas are mainly entirely excluded from the information society. Thus, there is a division on urban-rural and traditional-modern ways of living, of which the traditional and rural have not been influenced by ICT to large extent. Also, the change is seen to be taking place between generations.

In terms of changes in working life, it was pointed out that those people using ICT in their work go to a totally different world after working hours. When they go home there is still the traditional way of living where most of the communication is done face-to face or by telephone. People who have been influenced by ICT in their work have mainly been information workers and government employees, it was claimed. For them the communication has become quicker and more efficient in work. It was claimed that also in the organisational level there are two parallel systems, the traditional one and the modern, technology based. Sometimes this takes place in one organisation; some people are using the modern information systems while others are using the traditional one. This causes problems in the distribution of information.

ICTs have changed the working culture in a sense that people are not tied to one place but they can travel and reach each other via cellphones and email. ICTs have made the bureaucracy easier since people can use mobile phones or email instead of going through the steps of bureaucracy first:

“In the past if I wanted to see a minister I had to go through the secretaries and this whole process before I could get through. Now I have the Prime Minister's cellphone number, I find it here in my phone and he answers when I call. So it takes away that layer, that bureaucracy. It creates direct access.” (1)

“I don't know when I last time went to a library. I look for answers for all my questions on the Internet, I don't need to go on the shelves. In the Internet all the documents are portable now, but it is also creating a very difficult gap between all those who have
access to information and those who have been left behind, that is a challenge. Has it changed our culture; to certain extent but not negatively.” (10)

Yet, this concerns only a minimum part of the labour. Most of the work is still done without computers in Namibia.

However, it could be seen that the change is only coming after there is a way to flexibly combine the traditions and the modern ways of information distribution:

“

We have to look at the culture, how do people live, how do people communicate, how do people manage information, in local communities, you find out that most of this information is kept in people's heads. People delay information through stories; they sit around the fire and tell stories, that is information society. People delay information through music, through the drums, so there is that information, how do we then get the information out from people's heads from the stories from the music, from drums and get it to be shared with others, across the country, across the region and across the world, that is a challenge. “ (10)

In Namibia, there is a big division between the rural areas and the urban areas in the way of life. In Windhoek people mostly live according to western-world standards; consume, work in the offices and the concept of time is different than in the rural areas. The Internet has changed the concept of time in Windhoek but in the country side it has hardly had any impact. The organisation of work was told to have changed only in very limited urban places.

One interviewee told about the governing culture in Namibia, how it has changed during her life. She told that earlier they used to sit under a tree and discuss with people. All problems were discussed through together and the headman of the village made the decisions. Now there is the new culture of elections, bureaucracy and ministries were new electronic governance systems are aimed to be implemented. Thus, the ICTs have not changed much themselves but the culture in general has gone through massive chances after the country's independence and inflow of western influences. However, the interviewee told that she wishes to keep up the traditional culture as well, where people discuss face-to-face even though she now lives in the capital city. She said that in the remote areas the old discussion culture is still used, there are no modern communication networks or modern concept of time. In this example the division to modern and
traditional way of living is clearly presented as the division to urban and rural ways of living.

Technology that people in the rural areas use is mainly mobile phone. Recently built towers make it possible for people to use them. It is also cheaper and quicker to be connected via the wireless towers than draw wires into houses.

“Northern Namibia is flat, so if you put up a tower suddenly you have 60km radius of people who have access to have a cellphone, and there are 70 per cent of our people living up there in the north and they now have access to telephones, that means they can call to their husbands or cousins or brothers who are working in the mines far away any time day or night.” (3)

“Massive changes have taken place in rural area through wireless technology, and this is expanding throughout the country. You can see Himbas walking around with cellphones, they can call their relatives, get medicine to their animals, and do whatever people do.” (3)

Although there are some advantages that ICT have brought to the rural areas, the divide between the rural and urban areas is significant. In the rural other developmental needs, such as basic water and electricity systems and access to basic education, are the priority needs in people's minds still. It seems that even though there is some discussion about ICT's possibilities to ease the access to education, for instance, the rural people are living in a world where there is no place for ICT.

The change is also seen to be taking place between the generations. It was mentioned that in the future things will change greatly since children are already using computers at schools. Even children in the rural areas are getting in touch with computers via the SchoolNet project. It was maintained, that in the future people will know how to use computers and Internet and their working culture will be very different from the one that is currently taking place. One of the interviewees said that her children will probably be influenced by computers and Internet in a totally different way than she has been influenced. The cultural impact that is coming to Namibia is very western kind so the interviewee saw that in the future eventually ICT will probably change culture in Namibia to more western world kind of way. However, the education that is now given in schools was considered very valuable and important.
“The culture will change because if you see now many of our students have computers at school, they even have some homework to do some research on the Internet. Things we did not have. And these people are the leaders of tomorrow and they have already had the knowledge from their school years and so childhood. So I think it will definitely change our society. And these people are not only people from town. They also come from villages. And once they go back to villages they go with this mind that I need computer and I need to research something. The older generations going out and the younger ones coming in. I think it will take some roots in Namibia but it will take time, definitely.” (1)
6. CONCLUSIONS AND DISCUSSION

In this study it was aimed to find out how the local people in Namibia experience the development of information society and especially how do they relate to a model that is developed in some other parts of the world and now brought to a new environment. For example, the structure of Finnish society has been completely different from Namibian one when the implementation of ICT systems began. Level of development is different in Namibia and this brings many challenges to the IS development. However, in Namibia there has recently been published the Namibia Vision 2030 which formulates guidelines for the further development. This ambitious plan maintains that Namibia will be a knowledge-based society, having highly educated professionals in all important fields of society and it will be producing content and equipment for the ICT field for domestic and foreign markets. In addition, it stipulates that the Internet connections will be available and used by most Namibians. Namibia will be an active participant on global economy receiving in-flows of capital from other countries. Currently Namibia is closer to the state that Castells described (p.14-15.) than a knowledge-based society; it is not receiving foreign direct investments to large extent, there is a large group of labour which is unemployed or under educated and there is lack of human resources. There are many challenges to overcome to achieve the goals of the Vision 2030.

Most of the conceptions of the local actors were not that optimistic as the Vision stipulates the future of Namibia to be. According to the interviewees' comments, the level of information society is at the initiatives currently and people still experience the computers and the Internet as an unfamiliar territory. Many had the impression that the future development will be rather slow as well. The local actors seemed to be eagerly waiting for the new era and had very optimistic views about the future, however, they brought up issues that are very challenging for the development. It is impossible to tell what will happen in the future, however, on the basis of this study it can be claimed that the areas that need to be developed are so numerous that transformation to a knowledge-based society will be a rather challenging process.

The main issues that came up from the analysis of the interviews, in addition to the previous note of the Vision 2030 being in contradiction with most of the interviewees'
comments, are the following: first of all, people prioritize other developmental needs than ICTs. The interviewees mostly had the conception that water and electricity networks should be built first and after proper level of infrastructure is achieved they can start improving access to computers. Especially the need for infrastructural development is important in the rural areas. A second significant result was that there seems to be lack of relevant context for use of ICT utilisation which makes the development of IS uncertain. As mentioned before, the situation in Finnish society, for instance, was completely different at the time the basis for information society was laid. A third result which can be considered as important to highlight is that the local people themselves did not see that importing of systems or models from the western world is problematic. This conclusion that can be made on the basis of the interviews was surprising to some extent; it could have been assumed that local people would like to have solutions that are specifically created to their social and economic environment and to fulfil their needs.

A fundamental dilemma seems to be in the matter that people wish to have the basic infrastructure in place before the access to computers. The issue that many of the local actors considered as a challenge, is the decision of whether or not to invest on the systems now and try to keep up with the ICT system development with the other countries or to invest on the basic infrastructure first and only after that on ICT. In the latter situation it would obviously be more difficult to reach the level of other countries. According to the Namibia Vision 2030 both developmental needs should be paid attention on at the same time and thus Namibia would have a functioning knowledge-based society and proper basic infrastructure systems by the year 2030. In the Vision there are set no priorities to the developmental needs but all the areas that need to be improved are supposed to be improved equally. At least this is the impression one receives when reading the Vision. It can be questioned how plausible that kind of view is. In the comments of the interviewees many common developmental needs were considered to be more important than building an information society in Namibia. In their comments it seemed that time for ICT investments in larger scale will be in the future, after the adequate level of basic infrastructure and education has been achieved. Especially the rural people are in need of basic infrastructure.
Furthermore, the ICT infrastructure is weakest in the rural areas, there is a digital divide between Windhoek and the rural areas and it has to be taken into account when planning the future. The users of ICTs are concentrated in the cities and mainly in Windhoek. The rural people have limited access to telephones and hardly any access to computers, some of them even lack access to radio. Further on, there exists digital divide in many levels; there is the divide between Namibia and the industrialized world, there is regional divide within the country and even in Windhoek the users are separated clusters. There is a digital divide in level of action, since people who have access to computers and Internet might not have the required skills to take advantage of the equipment. The lack of required skills appeared for instance in the case in which the e-offices were blamed to be run as Internet cafés since the personnel lacked the skills to utilize them more efficiently.

It is a great challenge for Namibia to achieve conditions where common people use and actually benefit of using ICTs in their daily lives and not to let the divide between the user groups only widen in the future. As Schiller mentioned it is a challenge to get ICTs to serve common people's humanitarian needs instead of it just remaining as a gadget of the elite or professionals. At the moment there is “information stratification” between Namibia and western world; the amount of information available for Namibians is quite limited in quality and amount since people do not have proper resources to access information. They also lack the education required in the process. To avoid western world lead information imperialism, publishing of locally produced information is essential. Only by establishing locally produced information on local languages Namibia can become an independent actor in the information age and in the global markets as it wishes, and avoid being dependent on other countries. There did not come up much of interest on behalf of the interviewees to actually develop Namibian content to the Internet. Currently, most of the content in the Internet is related to western models and interests and it seems that people do not recognise to large extent that transformation to information society should not be the same as to acquire western world-derived ideas about everything. It also seems that on the basis of information society development process there is an assumption that people should transform their taste to western world kind of taste of cultural products. This enhances development of information sources that are based on western world content. It could be a wealth for people from outside of
Africa if they could access Internet pages that would contain information about Africa, reflecting the cultural issues of those countries in a unique way.

Further on, one of the main points in the Namibian information society development is the problem of lack of proper context in which to utilize ICT. The government, for example, was blamed to have many parallel systems in administration such as incongruent policies and this was accused to make utilisation and development of the ICT based systems difficult. It was also claimed by some of the interviewees that the work organisations have not utilised the systems entirely and the culture of communication has not been influenced to large extent by the systems. For instance the email has not changed much eventually since the amount of people who actually use it is so limited. It is easier and more convenient for the people to meet face to face than virtually. Furthermore, there were introduced some potential areas where ICTs could influence to people's lives but in reality the structure of the society is not advantaged enough for these possibilities to take place. For instance, Internet would offer an opportunity for the farmers to check up the current price for meat, however, since the historical reasons the society lacks the markets themselves. What would be essential is to find out what the real context in which the ICTs could be utilised effectively would be or actually improve the systems first and mobilize the equipment to serve the systems afterwards. In case people were more aware of the opportunities in which ICTs could be utilised the information society development might be a bit faster and more efficient. Also the government of Namibia has got responsibility on planning good ICT policies that make the IS development possible.

The third main point, and probably the most interesting one, that arose from the analysis of the interviews is the fact that Namibians seemed not to have a problem with the issue that information society is a model from the western world and that the equipment are imported from other countries. This conclusion is contradictory to the theoretical viewpoint of the thesis; it was mainly assumed on the basis of the arguments of Schiller, von Haldenwang and Tammilehto that Namibians would like to "defend" their culture and traditional Namibian ways of doing things and be critical towards imported models and equipment markets that are western world ruled and oriented. Also the conclusion is in contradiction with the other results to some extent. If people find the development of
information society problematic and having many challenges, why do they still welcome the systems? Why they are not critical but only passively welcome the models?

Further on, despite the fact that the local actors maintained that they are not dependent on the western world or that there are not any problems of being so, there came up some evidence of problems. First of all, many of the interviewees mentioned that the CABLE-project has brought the IS development to the country and it is the main actor driving the new systems. In spite of the benefits that the project has brought, there are some problems related to the actions that the project had been implementing which can be seen as a conflict of local needs and imported systems. For instance the e-offices were told to be not utilised properly and to the extent as they could. This reflects the situation where there is not enough resources locally to utilize the systems as they were meant to be utilised. Also, the project was accused of looking for too expensive technology and too sophisticated systems (i.e. the calendar) that had no relevance in Namibian context. It could be claimed that these are some proof of the problems related to the relationship between the imported models and the local needs and there might occur waist of resources to some extent.

It was surprising that the local actors mainly understood any development trend from the west being a positive influence and that many had the conception that in case foreign people want to come to the country with new innovations they should be welcomed. There was some criticism presented but that was quite few. The critique maintained that importing of different kinds of models and systems from elsewhere might lead into a situation where there is no coherency in the systems. When the systems are brought from donating countries the local people have not been actively working to plan them to suit local needs and local people probably have not been active in the process of assimilating the system to the new environment but there have been foreign consultants that have done it. The consultants were accused of not looking the situation from wider perspectives than their own. The systems might stay unfamiliar for the Namibians and cause costs since they are not tailor-made for the needs of the country. It was claimed that Namibians should have sustainability in planning and developing the systems. However, this kind of criticism was scarce and it could be claimed that lack of criticism might, further on, enhance the development of incoherency. There needs to be critical thinking in assessing
the systems, in that way the shortcomings of implementations could be better controlled. The lack of criticism towards donations from other countries is also contradictory to the fact claimed in the Vision 2030, according to which Namibia wants to transform from an aid receiving country to an aid providing one. (The Namibia Vision 2004, 185.) Although that is supposed to happen by the year 2030, in the future, however, it could be maintained that if this is the aim there should be criticism “in the air” already.

However, it remains as an interesting question why the local actors had an opposite view about development co-operation or donations than the theorists introduced in the beginning of the thesis. It could be maintained that there are some reasons related to cultural history behind the attitude, probably the colonial heritage is reflected in the attitudes. However, if the development is wanted to be sustainable probably the local people should take more responsibility about the planning and critical assessment of the aid projects.

Concerning the theories of M. Castells, the analysis of the interviews supported his views introduced in the theoretical part. There is a long way for Namibia to go to informational capitalism (p.13) in which the basis of the country's economy is laid on information production and processing. The Namibia Vision 2030 recognizes the shortcomings in the current situation but suggests that in 2030 the country will be having informational capitalism based economy. The interviewees mainly considered that information society brings technically relieving solutions to people's lives, they did not see that much wider societal change to take place. However, informational capitalism demands wider societal changes than just taking new technology into use.

A significant challenge for this development is also the lack of labor force. Castells' claims about the division of labor in the information age were clearly seen in the situation of Namibia. It is obvious that in Namibia there is a large group of redundant workers who do not even necessarily have the potential to respond to the needs that information age sets for. Further on if the population rate of the country is small already and big amount of the working force is totally unskilled for the information economy then the amount of remaining people is very limited. In addition there is a serious threat of AIDS among the labor force. The Namibia Vision claims that AIDS is under control by the year 2030,
however, AIDS can be seen as a serious threat to the development of information society in Namibia. In a way Castells' fatalistic thought about the state of Africa can easily be supported. However, there are also evidences that Namibia will benefit of ICTs and hopefully ICT will be a significant part of the country's economy in the near future.

While doing this study there came up few ideas for further research. First of all, alternative way to implement this study would have been to interview people with different kinds of backgrounds, for example students from UNAM or people in the rural areas to find out what kind of conceptions they have. Actually it seems a very interesting target for research. It would have been interesting to compare people's views and to find out what kind of knowledge people who are living in the rural areas have about ICT issues. There are some statistics about the amount of computers in the northern rural areas for instance, but what really would be interesting, instead of numbers, is the social or cultural relevance people give to the new technology. This is interesting since the new policies claim that all Namibians will in near decades have access to Internet for instance. Another target for interesting research would be to investigate the background of attitudes towards development co-operation or investigate more in depth the understanding that local people in Namibia have towards aid donations. For further research, it would be an interesting target to do a follow-up research about the same topic as in this thesis after five or ten years and see whether the information society has really taken place in Namibia or to what extent people are using electronic tools.
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Concept of Information Society
- How does the interviewee define the concept?
- What is included in the information society in his/her opinion?
- How does the interviewee see the current situation of IS in Namibia?
- Does he/she have an optimistic view about the IS in general?

Opportunities of Information Systems in Namibia
- What kind of opportunities does the interviewee see there is related to information systems?
- What are the already achieved advantages?
- Are there any unutilized opportunities in his/her opinion?

Challenges in IS development in Namibia
- What kind of things in his/her opinion are hindering the IS development?
- What kind of solutions does he/she see there could be to these problems?

General level development in the society
- What are the general developmental needs in Namibian society?
- Are there any possibilities in his/her opinion that ICT could help in these developmental needs?
- How could ICT enhance development?

e-Governance
- How does the interviewee understand the concept of e-governance?
- What kind of opportunities does he/she see there is related to e-governance in Namibian context?

Information Society a model from the West
- How does the interviewee relate to the situation that IS and e-governance are models improved in the western world and they are imported as such to a new environment?

Impact of ICTs on culture
- Has ICT changed something in people's lives, in terms of work for instance?
- What kind of possible impacts does the interviewee see there might be in the future?