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South Africa's ICT-to-the-poor policy: does it reveal the potential of a developmental state?

Paper presented to panel 57:
"The African developmental state: pipe dream or renewed possibility?",

The 4th European Conference on African Studies (ECAS 4), Uppsala,
June 15-19, 2011

1.Introduction

> "[T]he dictum 'no developmental state, no development' still applies".
> (Peter B. Evans, 2010:52)

In a recent anthology (Edigheji et al, 2010), several authors argue that the 21st century developmental state has to be democratic, socially inclusive and human capability-enhancing. From that perspective, the 'New South Africa' that emerged from the first-ever democratic elections of the country in 1994 aspired to become a leading 21st century developmental state. The 1994 'Reconstruction and Development Programme' (RDP) was comprehensive and detailed in the measures to redress the racial and social inequalities created by the apartheid-era, and it set out in concrete terms a democratic vision of socially inclusive development. Human capability expansion was also addressed with RDP's emphasis on education, including the area of information and communication technology (ICT), where the aim was "to provide universal affordable access for all as rapidly as possible" (ANC 1994).

The ANC government subsequently designed several instruments to redistribute resources in order to extend services to poor people and previously disadvantaged communities. These included the Universal Service Obligations (USOs) imposed on the telecommunication operators and the Universal Service and Access Agency of South Africa (USAASA), which was responsible for the Universal Service and Access Fund (USAAF). After Thabo Mbeki took over as president in 1999, the fast development of the ICTs was emphasized as a key to achieve growth through increased integration to global markets. More than 10 years on, South Africa has almost achieved universal access to telephony thanks to the marked-driven 'cell phone revolution'. However, access to computers and the internet has stagnated in absolute terms and relative to other developing countries. Between 2002 and 2007, South

Africa dropped 10 places from number 87 in the ITU's ICT Development Index between 2002 and 2007(ITU 2009). In 2000, 5.4 per cent of the South African population were internet users, and this figure had increased to only 8.8 per cent nine years later. The rest of Africa had managed to catch up with South Africa, and it has even been overtaken by crisis-ridden neighbour Zimbabwe (see table 1). This raises the question: what went wrong in New South Africa's ICT development?

Table 1: Internet users per 100 people[1]

	2000	2005	2009
South Africa	5.4	7.5	8.8
Zimbabwe	0.4	8.0	11.4
Africa	-	2.2	8.8
World	-	15.9	27.1

Source: International Telecommunications Union (ITU), 2010

The paper is based on a recent case study of USAASA and its interventions towards poor communities in KwaZulu-Natal.[2] We have two aims. First, it tries to explain the failure of the ICT-to-the-poor policy in South Africa. The second ambition is to connect this sector analysis with the discourse on the developmental state with particular reference to Peter Evans (1995, 2010) and Edigheji et al (2010). The central question we are addressing is: what does South Africa's ICT-to-the-poor policy tell about the potentials of the country to bring about a 21st century developmental state? To this end there are 3 more sections. A theory of the developmental state is presented in section 2, which also argues for the relevance of using ICT policy to test the potentials for a developmental state. Section 3 describes what we consider to be a policy failure, while section 4 tries to explain this failure by applying in terms of the developmental state.

2.Analytical-theoretical framework

Theories of the developmental state is highly relevant to analyses of policy implementation in modern South Africa. As already noted, the 1994 RDP programme was based on the assumption that the apartheid state was to be transformed to a democratic and socially inclusive developmental state. Realizing that the Mbeki government had lost momentum in this regard, ANC's 52nd national conference (in Polokwane, Limpopo Province) in 2007 pledged to build a developmental state that will play a central and strategic role by 'directly investing in underdeveloped areas and directing private sector investment' and will play a

[1] Estimated number. This includes those using the Internet from any device (including mobile phones) in the last 12 months. A growing number of countries are measuring this through household surveys. In countries where surveys are not available, an estimate can be derived based on the number of Internet subscriptions. (ITU, 2010).

[2] CLIQ (Community-based Learning, ICTs and Quality-of-life), an action research project at the University of KwaZulu-Natal.. CLIQ worked in partnership with four different community telecentres in order to provide computer training and computer access to the CLIQ participants. As a research project, CLIQ has recorded the experiences of the users of telecentres in these communities. A master thesis based on the project is written by Schaanning (2010). A preliminary final report is written by Attwood, Braathen and May (2010). This paper draws on these reports.

critical role in addressing the problems of high 'unemployment, poverty and inequality' (ANC 2007:19). 'Whilst acting effectively to promote growth, efficiency and productivity, it [the developmental state] must be equally effective in addressing the social conditions of the masses of our people and realizing economic progress for the poor' (ANC 2007:18).

Hence, the ANC has formulated a social democratic approach that combined economic concerns for growth with social concerns for the poor. However, in a state with limited capacity the challenge is to kill two birds with one stone. But which strategy can best serve the dual economic and social goals in the 21st century? Evans (2010) thinks the best strategy is *capability expansion*, and his suggestion is informed by three very different strands of 'leading edge' development theory.

First, the new growth theory (Lucas 1988, Romer 1994, Aghion & Howitt 1998 and Helpman 2004). It supports the proposition that growth depends primarily on human capital and ideas to support the service sector. "The centrality of services creates a new set of challenges for the developmental state, forcing the state to focus on people and their skills instead of machines and their owners" (Evans 2010:42).

Second, the 'institutional turn' in development economics (Acemoglu and Robinson, 2006; Hoff and Stiglitz 2001, Rodrik 1999, Rodrik et al 2004, among others).) They use historical evidence to ground arguments about the detrimental effects of the dispossession of small producers. Land reform and increased productivity among small farmers is an important contribution to equitable growth [as the examples of South Korea, Taiwan and China show (Hart 2002), and Colombia and Costa Rica in contrast to Guatemala and El Salvador (Nugent and Robinson, 2010]. Equitable growth depends on the design of appropriate and socially-embedded institutional arrangements.

Third, the capability approach based on various works of Amartya Sen (1999) and Mahbub Ul Haq (1995). This approach considers the growth of GDP not as an end in itself, but as proxy for improvements in human well-being. Human capabilities are both means and ends to development. Not all capabilities are relevant to economic growth, but without an expansion of those capabilities that are relevant, sustained growth is impossible.

Based on these theories Evans suggests that "a 21st century developmental state must be a *'capability enhancing state'*. Expanding the capabilities of the citizenry is not just a 'welfare' goal, it is the inescapable foundation of sustained growth in overall GDP" (Evans 2010:37-38)

The policy implications of a capability enhancing strategy are many, with corresponding analytical benchmarks for those who want to carry out policy evaluations. We here present ideas from Evans (2010), Edigheji (2010) and Mkandawire (2010, who seem to agree on five points:

1. Endogenous learning. Robust public institutions have to be developed, in a continually reflexive, 'learning by doing' process. "Only a flexible, creative process of exploration and experimentation that pays careful attention to local institutional starting points will succeed" (Evans, 2010:37). Direct imports of policies and institutional instruments, as well as one-

size-fits-all solutions from abroad, should be avoided.

2. Public sector provision of capability-enhancing services. Health and educational services are the most crucial. Infrastructure, such as water delivery, is closely connected to health. Other infrastructure – e.g. efficient, inexpensive public transportation – can be a key to increasing access to education, training and the opportunity to use the skills acquired in a job.

3. Public sectors based on a professional and committed bureaucracy. Some of the ideal-typical Weberian principles must be cultivated, above all meritocratic recruitment to public service and public service careers offering long-term rewards based on performance. These devices help to "give state employees a sense of esprit de corps and belief in the worthiness of their profession" (Evans, 2010:47).

4. Effective civic participation in democratic deliberations. Development strategies and policy cannot be formulated by technocrats, but must be derived from democratically organized public deliberation (Sen 1999) and local knowledge (Rodrik 1999). "Accurate information on collective priorities at the community level is a sine qua non for a successful 21st century developmental state" (Evans 2010:49). Authoritarianism and blind top down' relations with communities, might have worked to industrialize countries in the 20th century, but will be counter-productive in the present day contexts.

5. Avoiding capture by capital; building a broad social-political support to state policies. The growing power of global capital and the growing integration of local capital into transnational networks has made close ties with capital riskier and more difficult for a developmental state. The 20th century developmental state's interaction with industrial elites gave these elites a reason to become a more collectively coherent class. "The 21st century developmental state must do the same for a much broader section of society (…) Shared interests in capability expansion are broad and deep but articulating them is very politically demanding task". The challenge is for the state to construct "an encompassing version of embeddedness" (Evans 2010:49-50).

We think South Africa's ICT-to-the poor policy is well suited to be assessed in terms of the capability enhancement framework. The above mentioned five benchmarks will be employed in the assessment of the policy.

3. South Africa's ICT-to-the-poor programmes.

The ICT policy in the post-1994 South Africa was one of the most progressive and pro-poor in the world at that time. While the vast majority of national telecommunication policies in the 1990s concentrated on privatization and liberalization of the telecom industry, the African National Congress (ANC) stated in its 1994 'Reconstruction and Development Programme' that one of its aims was to "to provide universal affordable access for all as rapidly as possible" (ANC 1994: 2.8.4). Although the White Paper on Telecommunications 1996 and the Act of Telecommunications 1996, were influenced by neo-liberal ideas and private sector interests, and

had an overall focus on liberalization and privatization, they also specified two central tools for inclusion of the poor and disadvantaged citizens:

- The *Universal Service Obligations (USOs*), to extend networks and services to under-served areas, which in South Africa coincided with the previously disadvantaged, poor communities. These obligations were first and foremost imposed on Telkom (the state owned telephony operator), but also on cellular operators. The Independent Communications Authority of South Africa[3] (*ICASA*), established by the 1996 Telecommunications Act, was mandated to issue licenses to operators with USOs.
- The *Universal Service and Access Fund (USAF*)[4], consisting of annual contributions from the operators in the market and was intended to finance the extension of services to inadequately served areas and to subsidize services to needy persons. The Universal Service Agency (USA, renamed *USAASA*), was responsible for managing USAF. USA was a small body set up "to promote the goal of universal service; encourage, facilitate and offer guidance in respect of any scheme to provide universal access or universal service" (RSA 1996: 49).

In 2001 the legislative framework was amended through the Telecommunications Amendment Act of 2001. This act moved the focus from access in households (universal service) to institutional access in schools and telecentres (universal access), and from telephone services to computer and internet services. It also introduced a two more tools to provide access in poor communities:

- The *Under Serviced Area Licenses (USALs)* were given to small or medium enterprises run by previously disadvantaged people to provide communications services in areas with a teledensity of less than 5 per cent. These small businesses were entitled to a 15 million ZAR (about 2 million USD) subsidy each from the USAF.
- The *E-rate* aimed at making internet affordable to schools by granting all public schools a 50 per cent 'e-rate discount' on internet services (RSA 2001).

These policy developments created three routes to enhance access among the poor.

First, establishing *telecentres* in geographical areas identified as 'historically disadvantaged'.[5] USAASA has since its inception in 1997, used the bulk of USAF for this purpose. The most recent USAASA telecentres were equipped with approximately 10 computers, a printer/ fax/ scanner and a photocopy machine, as well as furniture and air conditioning. The telecentre was often linked up to the internet by USAASA, usually through the state owned distributor SENTECH. The intention was to deliver the telecentre equipment as a one-time grant to a local community-based organization (CBO), non-governmental organization (NGO) or entrepreneur, who were to run the organization as a small business.

The second route was to establish computer laboratories or *cyberlabs in schools*, mainly secondary schools. Since 2001, USAASA funded cyberlabs consisting of 30-40 computers,

[3] The Act established the South African Telecommunications Regulatory Authority (SARTRA), later renamed ICASA.
[4] The fund was initially named the Universal Service Fund, and renamed to USAF in 2005.
[5] This was despite the fact that the establishment of telecentres was not included in the legislative framework until 2001.

internet, a server and an interactive whiteboard[6] in public schools (USAASA 2008a). At the same time, private companies were given USOs in their license to connect schools in disadvantaged areas at a reduced E-rate. Finally, private companies and NGOs provided computers to schools on their own initiative.

The third route was the connection of individuals and households in 'under serviced areas' to fixed line and cell phone networks. Telkom was the key operator here and was given extensive USOS to connect households to its fixed line network and establish pay phones as a part of its license in 1997. The cellphone companies were also given USOs to establish pay phones in disadvantaged areas (Hodge 2003).

Despite the progressive intentions, these initiatives have only had limited success.

1)Telecentres: Between 1997 and 2000, USA helped establish 65 telecentres. An evaluation of the telecentre policy carried out in 2001 showed that 32% of the telecentres were not operating or had been shut down (Benjamin, 2001a). Although they were all fully equipped at the outset with between one and four computers, telephone lines and internet devices, only 8 percent offered access to the internet (Benjamin, 2001a). The primary reasons given for their non-functionality were: (i) burglary; (ii) technical problems; (iii) managerial weakness and (iv) financial problems. Just under a third of the telecentres could afford pay a salary to their staff, supporting Benjamin's conclusion that the majority of the telecentres were neither effective nor sustainable. Benjamin went on to claim the cause was "the very top-down roll-out approach of USA", with "virtually no systematic needs analysis at the telecentre sites, and the equipment installed at each centre was not based on a consideration of local requirements" (Benjamin 2001b:147). He argued that "[m]uch of the community ICT work in South Africa seems more interested in the technology than people", and that the challenge was to disregard the allure of technology and to explore "how computers can be used by people in poverty" (Benjamin 2001a). These problems of the telecentre channel were realized by USAASA in a 2005 report (USAASA 2005:4)

Despite critical evaluations which indicated policy failure and the realization of this failure by USAASA, the report from the CLIQ project (Attwood et al 2010) suggests that the policy has not been changed or improved. By 2008, after 11 years of operation, the agency had only established 155 telecentres and astonishingly many of them were not operational due to a range of technical and managerial challenges (USAASA 2008a). This is also reflected in the CLIQ study conducted in four poor communities in KwaZulu-Natal. Attwood et al. (2010) investigates the situation of four of the best functioning telecentres in KwaZulu-Natal according to USAASA. They define functionality as having operational computers; a working internet connection; knowledgeable staff; a management structure; and users. They found that of these, only one was highly functional, two where only partially functional and one was non-functional.

2) Schools: Several actors have provided computers and internet to schools, but the results are disappointing. USAASA established 234 school cyberlabs in the entire country between 2001 and 2008. In comparison, the provincial department of education delivered 604 cyberlabs to schools in KwaZulu-Natal in only three years (Schaanning 2010). After the second legislative reform, companies were given USOs to provide internet connectivity to schools as a part of their license

[6] Interview, USAASA representative, 02.11.2008

or in exchange for access to bandwidth. However, the regulatory body (ICASA) lacked capacity in its compliance unit, and the legislative framework had become overly complex.[7] Hence, the licensing and compliance section was unable to monitor the implementation of the USOs and did not know to what extent the companies were complying (ibid). Also, the E-rate seemed to not be implemented. According to the Head of the Compliance section within ICASA, 'the E-rate was not implementable because the requisite regulations had not been finalized. Now that they have been finalized, a new challenge that has emerged is centred on interpretation of the regulations' (ibid). Additionally, private operators and NGOs had provided computer labs and internet to schools on their own initiative, and some schools had bought the computers with their school budget. However, the combined efforts of all these actors do not seem to have yielded good results. According to official education statistics, 26.5% of the schools in South Africa had access to computers for teaching and learning purposes in 2002 (DoE 2004). In 2009, this was reduced to only 23% of schools having computers for teaching and learning purposes (RSA 2009). One reason for this may be the lack of security measures, insurance and maintenance budgets and hence a frequency of theft and a short life span of many computer-labs. Only 12.7% of the schools in South Africa had an internet connection in 2009 (DoE 2009).

Table 2: The roll-out of ICT to schools

	2002	2009
Schools with computers for teaching and learning	26.5%	23%
Schools with internet	n/a	12.7%

Source: Department of Education (DoE) 2004, DoE 2009

3) Households: With respect to the market interventions to improve access in households – that is, the USOs and the USALs route – the results seemed poor. In 2004, ICASA issued 7 USALs to small businesses and by 2008, USAASA had paid out 55.6 million rand (approx. 7 million USD) from the USAF in subsidies (USAASA 2008b). However, there were major implementation problems with the USALs and according to USAASA's annual report from 2008, none of the USALs had operating networks and were providing services (USAASA 2008b). With respect to the USOs, the partially state-owned monopolist of landlines, Telkom, was given extensive USOs to establish new lines in under-served areas in 1997, and the major mobile telephone operators MTN and Vodacom had been given USOs to establish Community Service Telephones in 1993 (Benjamin 2001, Hodge 2003, Lewis 2006). Telkom met its obligations, but many lines in disadvantaged areas were disconnected shortly after due to their cost (Hodge 2003). The obligations on the cell phone companies have been more successful. The cell phone companies have exceeded their coverage requirements with respect to the roll out of pay-phones. However, they might not have been placed in the most needy areas (ibid). There were no USOs to provide computers and internet to households. This has been left to the market.

If one assumes that the poorest people in South Africa live in traditional dwellings and shacks, the table underneath indicates the failure of the ICT-to-the-poor policy. This is with the notable exception of cell phones.

[7] Personal communication, Manager of Compliance, Licensing and Compliance Division, ICASA, 03.07.2008

Table 3: ICT Access in households

	Landline	Cellphone	Computer	Internet
Residing in Traditional dwelling made of traditional materials	1%	57%	1%	0%
Residing in a shack in an informal settlement	2%	70%	2%	0%
All households in South Africa	18.6%	72.9%	15.7%	7.3%

Source: Stats SA 2007

The limited success of providing universal access to computers and the internet in poor households and communities is illustrated by data from the CLIQ project collected in four poor communities in KwaZulu-Natal. Three of the four communities selected were served by the best functioning telecentres in KwaZulu-Natal according to USAASA. Hence, the communities in the sample probably have a higher degree of access than other communities. Furthermore, the sample of respondents is small and not randomly selected. Instead the respondents are self-selected: participants interested in a computer course were interviewed in the survey and it is therefore likely that people with some computer and internet experience are overrepresented in the sample.

The findings from the CLIQ survey show that even in these communities and in this sample, few people had actually used the telecentres and cyberlabs. The table below shows that only 28.5% of the informants had used a computer before and only 11.1% had used the internet. The table further show that access to ICTs in poor communities largely stems from mobile phones in the household. Few people had access to fixed line phones, computers and the internet at home.

Table 4: Percentage of CLIQ respondents who have access to or used ICT

	Urban (N=39)	Peri-urban (N= 47)	Rural A (N= 88)	Rural B (N= 62)	Total (N=236)
Have used a computer before	54	55	17	16	28.5
Have used a computer within the last 6 months	51	21	8	10	19.0
Have used internet before	34	9	11	0	11.1
Cell phone in household	87	98	90	94	91.9
Fixed line in household	33	15	3	0	9. 7
Computer in household	11	11	2	0	4.7
Internet in household**	13	6	5	0	5.1

Source: CLIQ Survey 2008

In the national survey mentioned above (table 3), 7.3 per cent of the households have internet, while in the CLIQ survey, 5.1 per cent of the households have an internet connection at home. Still, the CLIQ data reveal the big socio-territorial differences in ICT access, even within the segment of South Africa's population that is relatively poor. In particular there is a big difference between poor communities in urban, peni-urban and rural areas, respectively.

To sum up, the ICT policy in South Africa was among the most progressive and pro-poor in the world and aimed to provide ICT to the poor through mainly three channels: telecentres (government and community supplied), schools (government and market supplied), and households (market supplied) in the disadvantaged areas. However, the implementation of the policy failed and the results among the poor on the ground are meager with the exception of cell phones.

4. Explaining policy failure

We here return to the five parameters presented in section 2 in order to assess the South Africa's ICT policy and to explain its failure to "to provide universal affordable access for all as rapidly as possible".

1. Lack of "endogenous learning". We find several flaws in the policy process. First and foremost it is characterized by a lack of learning from experience. Despite a very thorough and critical evaluation of the initial experiences (Benjamin 2001) and the realization by USAASA in 2005 of its failure to achieve its goals, the policy continued unchanged. The CLIQ study revealed that no learning had occurred since 2001, and that the roll out of telecentres followed largely the same approach as before (Attwood 2010).

Secondly, the ICT-to-the-poor policy has been fixated on community telecentres. This reflects that South Africa has been stuck with the same imported 'toolkit' for almost 15 years. The "*ICT Regulation Toolkit*" is developed by the UN agency ITU and the World Bank agency Infodev, and this toolkit mentions USOs, USAFs and telecentres among the most frequently adopted Universal Access tools. (Dymond et al. 2008). The idea of a telecentre, for example, arose in Scandinavia in the 1980s and has since spread to many developing countries (Dymond et al. 2008:3.3.3). In South Africa, the idea of the telecentre came through the Canadian government agency International Development Research Centre (IDRC). Between 1997 and 2000, its ICT programme 'Acacia' concentrated its work in the following four sub-Saharan African countries: Mozambique, Senegal, South Africa, and Uganda. In South Africa, the IDRC assisted USA/USAASA in the establishment of 12 of the 81 telecentres established by 2001 in different parts of the country (Parkinson 2005).

Thirdly, the way of adapting to the international neo-liberal policy environment is characterized by what Thandika Mkandawire (2010) labels 'maladjustment'. In 1998, the liberalization agreement of the World Trade Organization (WTO) committed its signatories, including South Africa, to liberalizing basic telecommunications. The goals and process of reform differs among the various countries, but the trend is clear. There was a movement away from state-owned monopolies towards a privatized and at least partially competitive industry, often monitored by an independent regulator (Noll 2000:183). South Africa imitated the institutional set-up of 'leading' Western countries by establishing very specialized agencies and funding mechanisms (such as the regulatory body ICASA, USAASA, etc). In addition to reflect a 'one-size-fits-all' approach, this is what Mkandawire criticizes as 'monocropping' – transferring ideal institutions mainly from Anglo-Saxon countries to the developing countries – and 'monotasking' which limited the scope of action of the institutions and reduced the space for politics and discretionary measures. The result is a state with few institutions for intervening into the markets and change

the status quo (Mkandawire 2010:63-64). The dominant (neo-)liberal thinking praises the lean state, public-private partnerships and community-based service provision. Exactly what we find in the ICT policy sector in South Africa.

2. Limited "public sector provision of ICT (capability-enhancing)services". According to Peter Evans, the developmental state must support a distribution of basic rights that give individuals incentives to invest in their own capabilities." At the same time the state must offer, in Sen's words, "a program of skilful social support" for these rights, emphasizing the centrality of public provision of capability-enhancing services".(Evans 2010:44). Perhaps the overall policy problem in South Africa is that although universal access to ICT is a public policy goal, it has not been recognized as a basic right in the 21st century. Hence, the public sector commitment to it is fragmented and weak.

This is seen in the way the government has depreciated the development agency in the ICT sector. According to our informants, and reflected in the budgets, , the government had prioritized to capacitate the regulatory body ICASA (and the market channel) rather than the development agency USA/USAASA. This was because the regulator needs to be well resourced to fight litigations from the operators, but it was also a punishment of USA/USAASA for having performed very poorly in the past, not even being able to spend the funds allocated to it.

Table 5: Programme allocations by Department of Communication, 2006/07 – 2008/09.

	2006/07	2008/09	Increase
USAASA (development agency)	20 100 000 ZAR	22 304 000 ZAR	9.5 %
ICASA (regulatory agency)	199 738 000 ZAR	242 272 000 ZAR	21.6 %

Source: DoC Strategic report 2006-2009 and 2007-2010

Another main bottleneck in the expansion of capability-enhancing services are the human resources in the public sector. For example, the head of the ICT section in KZN provincial Department of Education stated that 'one of the major challenges in implementing the strategy is skills training and professional development of teachers and civil servants especially in the rural areas'.

3. Questionable "public sector based on a professional and committed bureaucracy". The new government inherited a major capacity problem from the apartheid government (Miller 2005, Picard 2005). According to our informants at the national level, this problem was especially visible in the ICT sector were skilled employees were limited and very expensive. The head of the policy unit in the ministry (Department of Communication) stated:
"It's not a matter of these institutions not trying or doing their best – it's a broader social-economic problem affecting all sector that we have to deal with and that is not easy. The skills problem is, however, more difficult in the ICT sector because we need skills and technologies change and we cannot keep up". (Schaanning 2010). Another leading official emphasises the high turn-over: "I have worked here for six years and I am counted among people with the longest service. Six years! This is a challenges to the institutional memory. In SA – all the talent and capacity in the bureaucracy that has been built since 1994 are taken by the private sector within

five-six years and the department starts from scratch. It's the same with USAASA" (Schaanning 2010).

The overall lack of resources and skills had created a hierarchy of status and salaries between the different public actors in the ICT sector and contributed to the high level of staff turnover and staff mobility. USA/USAASA had the lowest salaries and status, followed by the department, the regulator ICASA and the Private sector. Several of our informants explained that university-graduates often started off in USA/USAASA without any experience on the ground from development programmes. After a couple of years they moved to the Department of Communications and from there they moved to the regulator ICASA. After having worked for a while in the regulator and had gained competence and knowledge about the policy and regulatory sector, they were snapped by the private sector with which the state could not compete in terms of salaries. This resulted in a brain drain from the public sector to the private sector.

In other words, the career paths of the public service in the ICT sector are dysfunctional. They undermine the development of a professional, committed and effective bureaucracy.

The other main 'bureaucratic' problem is the fragmentation and poor leadership, particularly of developmental state functions. The national implementation system is plagued by a lack of cooperation and coordination between the various policy and implementation agents. The Departments of Education does not work closely with the Department of Communication regarding ICT-related capability enhancement. The cornerstone institution in the ICT to the poor policy, the Universal Service and Access Agency (USAASA) is largely played out on the sideline. Because of poor results in the past, the agency is denied full access to the Universal Service and Access Fund. However, the poor performance of USA//USAASA has been publicly known for a long time. Still, still the government has not done anything to improve the sub-sector. It could have increased the capacity and funds, or changed the structure so that other institutions could access the funds. Instead, the legislative reforms in 2001 and 2005 maintained the structures of the sector, as well as the mandate of USAASA and the USAF, largely unchanged (RSA 2001, RSA 2005).

4. No "effective civic participation in democratic deliberations". The ICT to the poor policy in South Africa was characterized by an increasing lack of democratic liberations on a policy level as well as in the implementation. While the first White Paper on Telecommunications (1996) went through a deliberative democratic process in which a broad specter of actors were consulted, the last reform of the sector in 2005 was adopted without any deliberation at all.

5. Capture by capital and no broad social-political reform coalition. The ICT sector in South Africa is dominated by the semi-privatized company Telkom (internet landlines and fixed line telephony) and the mobile telephony operators MTN (semi-private) and Vodacom (private). They have strong links with multinational capital groupings. Moreover, much of their top management structures are recruited from the top echelons of the ruling party ANC. There are close personal networks between state and telecom industry leaders. The users/consumers are disorganized, and there is no broad socio-political coalition pushing for and monitoring universal, affordable and high quality access to ICT. This makes the prospects of sector policy reforms quite dim.

5. Concluding Remarks

Our case study supports the views expressed by the contributors to the anthology *Constructing a democratic developmental state in South Africa (*Edigheji et al, 2010): South Africa is not a developmental state. However, a more difficult question is whether the country is on the way – or half way - to become a developmental state. We agree with Karl von Holdt who writes: "The state that we do have today resembles far more Evans' description of the 'intermediate states' of Brazil and India" (von Holdt 2010:257). After Evans published his book in 1995, both India and Brazil have moved fast – Brazil probably most in the direction of a more democratic and socially inclusive developmental state. What made this shift possible? Two opposite explanations or views should be discussed.

On the one hand the technocratic piecemeal reform view. We may identify certain 'pockets of efficiency' (Evans 1995:65) which when combining administrative reforms and sound sector policies can be scaled up or rolled out to cover several sectors.[8] The continuity of reforms from the conservative president Fernando Henrique Cardoso to the social democratic president Lula may explain Brazil's recent development. On the other hand the more radical political economy view, which emphasizes that Lula has represented a shift in political power. Nevertheless, as Ben Fine concludes, "a shift in political power is less than likely to come from a state relatively autonomous from class or other interests but more likely to flow from a shift in who exercises power over the state" (Fine 2010:180).

References

Acemoglu, D. and J. Robinson, 2006, *Economic Origins of Dictatorship and Democracy*. Cambridge: Cambridge University Press.

Aghion, P. & P. Howitt, 1998, *Endogenous Growth Theory*. Cambridge, MA: MIT Press.

ANC, 1994. *The Reconstruction and Development Programme*, Umanyano Publications, Johannesburg.

ANC, 2007. *ANC 52nd national conference: resolutions.* www.anc.org.za/ancdocs/history/conf/conference52/resolutions.

Attwood, H, E. Braathen and J. May, 2010. Telecentres and poor communities in South Africa: What have we learnt? Paper presented at the panel "Comparative Experiences of Chronic Poverty and access to Information and Communication Technologies (ICT)",The Chronic Poverty Research Centre (CPRC) Conference, **"**Ten years of 'war against poverty'. What we have learned since 2000. What we should do 2010-2020".8-10 September 2010, Manchester, UK

[8] The mobile telephony subsector in South Africa is obviously a pocket of efficiency. With the current rapid technological development, the cellular hand-set may soon provide the affordable platform for universal access to the internet.

Benjamin, P., 2001a. 'Telecentres in South Africa'. *Journal of Development Communication*: Special Issue on Telecenters 12(2): 1-6.

Benjamin, P., 2001b. *Telecentres and Universal Capability. A Study of the Telecentre Programme of the Universal Service Agency in South Africa 1996 -2000*. Aalborg: University of Aalborg. PhD dissertation.

CLIQ (Community based Learning; ICT and Quality of Life) 2008. CLIQ Pre-Asessment Survey. Durban: School of Development Studies. University of KwaZulu-Natal.

Department of Communication, 2006. *Strategic plan 2006-2009*

Department of Communication, 2007. *Strategic plan 2007-2010*

Department of Education (DoE) 2004. White Paper on E-education: Transforming Learning and Teaching through Information and Communication Technologies (ICTs). White Paper No 26734 of 26. August 2004. Pretoria: Department of Education.

Department of Education (DoE) 2009. *Education Management Information Systems*.

Dymond, A., S. Oestman, K. Whiting, C. Smithers, C Milne and R. Milne 2008. 'Module 4: Universal Access and Service' in ITU-Info Dev ICT regulation Toolkit. Accessed online at: http://www.ictregulationtoolkit.org on January

Edigheji, O., (ed.) *Constructing a democratic developmental state in South Africa: potentials and challenges*, Cape Town: Human Sciences Research Council.

Edigheji, O., 2010, "Constructing a democratic developmental state in South Africa: potentials and challenges", pp. 1-33, in Edigheji, O. (ed.) *Constructing a democratic developmental state in South Africa: potentials and challenges*, Cape Town: Human Sciences Research Council.

Evans, P.B., 1995, *Embedded Autonomy. States and industrial transformation* .Princeton, NJ: Princeton University Press.

Evans, P. B., 2010, "Constructing the 21st century developmental state: potentialities and pitfalls", pp. 37-58, in Edigheji, O. (ed.*) Constructing a democratic developmental state in South Africa: potentials and challenges*, Cape Town: Human Sciences Research Council.

Fine, B.,2010, "Can South Africa be a developmental state?" pp. 169-182 in Edigheji, O. (ed.*) Constructing a democratic developmental state in South Africa: potentials and challenges,* Cape Town: Human Sciences Research Council.

Hart, G. 2002. *Disabling Globalization: Places of Power in Post-apartheid South Africa*. Berkley CA: University of California Press

Helpman, E. 2004. *The mystery of economic growth*. Cambridge MA: Harvard University Press.

Hodge, J. 2003. 'Universal Service through Roll-out Targets and License Conditions: Lessons from Telecommunications in South Africa.' *Development Southern Africa* 1: 205-225.

Hoff, K. and J. Stiglitz. 2001. Modern economic theory and development. In G. Meier and Stieglitz (eds). *Frontiers of development economics*. New York: Oxford University Press.

Holdt, K. von, 2010, "The South African post-apartheid bureaucracy: inner workings, contradictory rationales and the developmental state", pp. 241-260, in Edigheji, O. (ed.*) Constructing a democratic developmental state in South Africa: potentials and challenges,* Cape Town: Human Sciences Research Council.

ITU, 2009. *Measuring the Information Society. The ICT Development Index*. Geneve: International Telecommunication Union

ITU, 2010. *ITU ICT Eye Statistics database*. www.ITU.net

Lucas, R. 1988, On the mechanics of economic development. *Journal of Monetary Economics* 22: 3-42

Mkandawire, T., 2010, "From maladjusted states to democratic developmental states in Africa", pp. 59-81, in Edigheji, O. (ed.*) Constructing a democratic developmental state in South Africa: potentials and challenges, Cape Town: Human Sciences Research Council.*

Nugent, J.B. and J.A Robinson, 2010. Are endowments fate? On the political economy of comparative Institutional Development. CEPR Discussion Paper No. 3206. Centre for Economic Policy research, London

Noll, R.G. 2000 Telecommunication Reform in Developing Countries. in A.O. Krueger (ed) *Economic Policy Reform*. Chicago: University of Chicago Press.

Republic of South Africa 1996. *Telecommunications Act*. Act no. 103 adopted 12. November 1996. Cape Town; Government of South Africa.

———. 2001. *Telecommunications Amendment* Act. Act no. 64 adopted 29. November 2001. Cape Town: Government of South Africa.

———. 2005. *Electronic Communications Act*. Act no. 36 adopted 11. April 2006. Cape Town: Government of South Africa.

Rodrik, D.1999. Institutions for high-quality growth: What are they and how to aquire them. Paper presented at International Monetary Fund Conference. Second Generation Reforms, Washinton DC (8-9Nov)

Rodrik, D. A. Subramanian og F. Trebbi. 2004. Institutions rules. The primacy of Institutions over geography and integration in economic development. *Journal of Economic Growth* 9: 131-165

Romer, P.1994. The origins of endogenous growth, *Journal of Economic Perspectives* 8:3-22

Sen, A. 1999. *Development as Freedom*. New York: Knopf

Schaanning, J .,2010. *Information and Communication Technology to the poor. An analysis of the ICT to the poor policy in South Africa*. Master Thesis in Political Science, University of Oslo.

Ul Haq, M. 1995. *Reflections on human development*. New York: Oxford University Press

USAASA. 2005. *Guidelines for Applications and Awarding of Universal ICT access centres*. Pretoria: USAASA.

USAASA, 2008a. *Contributing to South Africa's Growth. USAASA: Budget, Strategy, Plan and Priorities for 2008/2009*. Presentation to the Portfolio Committee: (Communications). Pretoria: USAASA.

USAASA, 2008b. *Annual Report 2007/2008: Creating Connections*. Pretoria: USAASA.