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TITOLO

The Relationship between Information and Communication Technologies (ICTs) and Citizen Engagement

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INDEX

1. Introduction

Governments and public sector agencies are gradually transforming themselves as a consequence of the increase development of the Internet technologies. In this context, e-government and e-governance have developed. In e-government, "the government uses information technology and the Internet to support government operations, engage citizens and provide government services" (Palvia and Sharma, 2007). In e-governance, the government and the public sector use information and communication technologies (ICTs) for the purpose of enhancing governance, which "implies the processes and institutions, both formal and informal, that guide and restrain the collective activities of a group" (Keohane and Nye, 2000; Palvia and Sharma, 2007).

Although there is evidence that "e-government can increase process-based trust by improving interactions with citizens and perceptions of responsiveness" (Tolbert and Mossberger, 2006), engaging citizens online in a meaningful way remains a challenge and "it is not certain that ICT encourages and assists citizens to participate and facilitate engagement" (European Commission, 2007a). Open government initiatives, however, attempt to overcome this challenge, through the implementation of three main principles: transparency, participation and collaboration. For this purpose, information about government's operations and decisions are rapidly provided, through, for instance, open data portals and digital inclusion policies. Moreover, increasing opportunities for the public to participate in policymaking are supplied, through online consultations, online forums and consensus-oriented procedures. Finally, partnerships and cooperation among government agencies, businesses and individuals are implemented. These initiatives aim at improve government's effectiveness, the quality of its decisions, and its accountability.

Although e-government has increasingly evolved around the world in the last years, there is still little empirical evidence that state-citizens interactions occur as these models predict. The aim of this paper is to provide an overview of the relationship between ICTs and citizen engagement. In particular, it is intended to analyze how the implementation of government's digital communication has an effective impact on the government-citizen interactions. An examination of the three main concepts involved in this evolution, which are participation, e-government and e-governance, will be given. In the second chapter, Indian and South African e-government and e-governance's developments will be provided. Then, two local projects will be analyzed in order to see both the positive effects and the challenges encountered in the application of ICT's projects aimed to engage citizens in governance. Finally, the main studies on the measurement of users' satisfaction in the

context of e-government and of citizen engagement will be reported.

2. Theoretical Background

Unprecedented possibilities for informing and transforming society are creating through new technologies which are indeed leading to an exceptional increase in the volume and types of data available (Melamed, 2014)[1]. In this context, "new spaces of political participation are sustained and even reinforced by communication, especially digital communication" (De Blasio and Sorice, 2016). In an increasingly digitalized world, therefore, there are numerous opportunities to improve democratic practices through online tools, which can be headed under 'E-democracy'. The new opportunities offered through technological developments should be seized on to stimulate citizens' involvement in the democratic process[2]. Therefore, a deeper understanding of this new form of public organization "that supports and redefines the existing and new information, communication and transaction-related interactions with stakeholders (e.g. citizens and business) through ICT with the purpose of improving government performance and process" (Chun et al., 2010) is essential.

Many studies have been carried out in order to have a further understanding of citizens' attitudes towards E-democracy and, in particular, towards electronic government (e-government) and electronic governance (e-governance). Kolsaker and Lee-Kelley (2008), for instance, have conducted a quantitative study in order to "uncover citizens' view on e-government and e-governance". Drawing upon the variables in Davis's (1989) technology acceptance model and Coleman's (2005) variables for connected representativeness, namely accessibility, willingness to listen to citizens, representing citizens' view, closeness to citizens and approachability, they conducted a quantitative research on 3,000 UK citizens. The authors found out that "users and non-users perceive moderate value in e-government for knowledge acquisition and communication, but little as vehicle of democratic engagement" (Kolsaker and Lee-Kelley, 2008). The findings indicated also that "with access, extended use can overcome initial uncertainty about e-government, producing a positive effect on individual evaluation of the valuable contribution of online services to everyday life" (Kolsaker and Lee-Kelley, 2008). Indeed, as Muhlberger (2005) pointed out, since the internet is a medium of choice, self-motivation plays a critical role in people's willingness to participate in the online public sphere and "frequent users are more motivated than others to acquire

[1] IEAG-The United Nations Secretary General's Independent Expert Advisory Group on a Data Revolution for Sustainable Development

[2] European Movement International

knowledge and exercise their voice via the online mechanism" (Kolsaker and Lee-Kelley, 2008). Finally, they stressed the fact that "feelings of active contribution to democratic processes are key to citizens' value perceptions of e-participation and e-governance" (Kolsaker and Lee-Kelley, 2008).

A big contribution has been given by Tolbert and Mossberger (2006), who explored "the relationship between e-government use, attitudes about e-government and trust in government" (Tolbert and Mossberger, 2006). They stressed the point that surveys show that "the most common reasons given for low trust in government are perceptions that government is inefficient, wastes money and spends money in the wrong things" (Baldassare, 2000). While some of the constraints on e-government implementation reflect "a lack of experience and capacity" (Ho, 2002), survey researches show that "citizens turn to government Web sites for a number of activities, but looking up for information (63 percent) is more common than online transactions (23 percent) or use of the sites for political participation"[3]. Tolbert and Mossberger used two-stage models for 2001 survey data collected by the Pew Internet and American Life project to examine attitudes toward government Web sites (Tolbert and Mossberger, 2006). The Pew Survey Data is a national random digit-dialed telephone survey, conducted between September 5 and 27 2001, with 815 people who had previously reported that they used government Web sites; this is the first research that "explores the impact of the use of e-government on citizen attitudes rather than information about e-government itself" (Tolbert and Mossberger, 2006). Three hypothesis have been tested: (1) the use of government Web sites leads to increased perceptions of transparency, effectiveness, accessibility and responsiveness of government; (2) improved evaluations of government institutions and processes lead to greater trust in government; (3) because e-government is more sophisticated at the federal level, the translation of positive attitudes toward government web sites into increased trust in government is more likely for the federal government, followed by state government, then local government (Tolbert, 2006). The results showed that "visiting a federal Web site was statistically related to citizen perceptions of transparency of government, accessibility of government information and increased responsiveness of the federal government; visiting a local government Web site was associated with citizen perceptions of accessibility and responsiveness of local government; visiting a state government Web site was statistically associated with only increased perceptions of responsiveness of state government" (Tolbert and Mossberger, 2006) . Furthermore, the survey found out that "the use of federal government Web sites appeared to have the greatest positive effect on citizen attitudes about

[3] Council for Excellence in Government, 2003

government processes" (Tolbert and Mossberger, 2006). Finally, Tolbert and Mossberger stressed the important point that, although the findings theoretically suggest that e-government can increase process-based trust by improving interactions with citizens and perceptions of responsiveness, there is not empirical evidence that citizen attitudes related to institutional trust, such as government transparency, lead to increased trust in government at any level (Tolbert and Mossberger, 2006).

Another important work has been carried out by Gaventa and Barrett (2012) who mapped the outcomes of citizen engagement, aimed at help "the design of and support for participatory programs meant to improve state responsiveness and effectiveness" (Gaventa and Barrett 2012). They reported on a meta-case study analysis of a sample of 100 research studies of four types of citizen engagement in 20 countries gathered by a 10-year research program conducted by the Citizenship DRC. They created a typology of four democratic and development outcomes through mapping the observable effects of citizen participation (Gaventa and Barrett,2012), including the construction of citizenship, the strengthening of practices of participation, the strengthening of responsive and accountable states, and the development of inclusive and cohesive societies. They found out that generally "citizen participation produces positive effects across these outcome types" and that "the outcomes vary according to the type of citizen engagement and to political context" (Gaventa and Barrett 2012). Indeed, positive outcomes are often mirrored by parallel negative outcomes; for instance, "where engagement can contribute to construction of active citizenship, in other cases it leads to a sense of disempowerment and a reduced sense of agency, or to new knowledge hierarchies", or "where engagement can contribute to strengthened practices of participation, it can be also perceived as meaningless, tokenistic or manipulated". Moreover, in some instances engagement can contribute to new skills and alliances which are used for corrupt or non-positive ends or are captured by elites or raise new issues of accountability and representation (Gaventa and Barrett 2012). However, despite the dangers or negative effects of participation, they found out that "overall, 75 per cent of the total outcomes were considered positive and the remaining 25 per cent negative" (Gaventa and Barrett 2012). In their work Gaventa and Barrett explored also "how outcomes of citizen engagement and the strategies for obtaining them vary across political contexts" and, in particular, they sought to explore "whether countries classified as having stronger democratic institutions were more likely to be associated with positive outcomes of participation than those with weaker democratic institutions". They found out that "the highest proportion of positive outcomes come from the most and least democratic settings" and that "the distribution of the types of outcomes do not vary a great deal according to the nature of the political

regime" (Gaventa and Barrett 2012). Finally, on the basis of these findings, it is possible to affirm that "engagement can make positive differences, even in the least democratic settings", a proposition that "challenges the conventional wisdom of an institution and state-oriented approach that relegates opportunities for building civil society participation to a more 'mature' or 'consolidated' democratic phase (Diamond, 1994; Gaventa and Barrett 2012).

In the next session, the literature on participation and citizen engagement will be explored deeper; moreover, a series of citizen involvement programs will be reported. Then, e-government and e-governance definitions will be presented.

2.1 Citizen Participation's Definition

As mentioned above, the aim of this paper is to increase our knowledge of a new and widespread phenomenon which are drastically changing the interactions between government and citizen; it is evident, indeed, that "the digital government or electronic government has started as a new form of public organization" (Chun et al., 2010) and that the revolution in information and communication technologies (ICT) has been changing both the daily lives of people and the interactions between governments and citizens (Chun et al., 2010). A clear definition of some concepts involved in this 'revolutionary process' is an important starting point for a deeper understanding of the issue. For this purpose, the next two paragraphs are dedicated to clarify the concepts of 'participation', with a major focus on 'direct citizen participation', e-government' and 'e-governance'.

Many definitions have been provided on the concept of participation. As Mapuva (2015) stressed, "citizen participation in community decision-making can be traced back to Plato's *Republic",* from which the "concepts of freedom of speech, assembly, voting and equal representation have evolved through the years to form basic pillars upon which democracies were established" (Mapuva, 2015). Tina Nabatchi (2012) defined citizen participation as "the process by which public concerns, needs and values are incorporated into decision-making". It may be indirect or direct: "indirect participation, such as voting or supporting advocacy groups, occurs when citizens select or work through representatives who make decisions for them, while direct participation occurs when citizens are personally and actively engaged in decision-making" (Nabatchi, 2012). Citizen participation has been defined also as " a process which provides private individuals an opportunity to influence public decisions, ensuring that citizens have a direct voice in public decisions" (Mapuva, 2015). In particular, direct citizen participation in public administration, can be defined as "the process by which members of a society (those not holding administrative positions

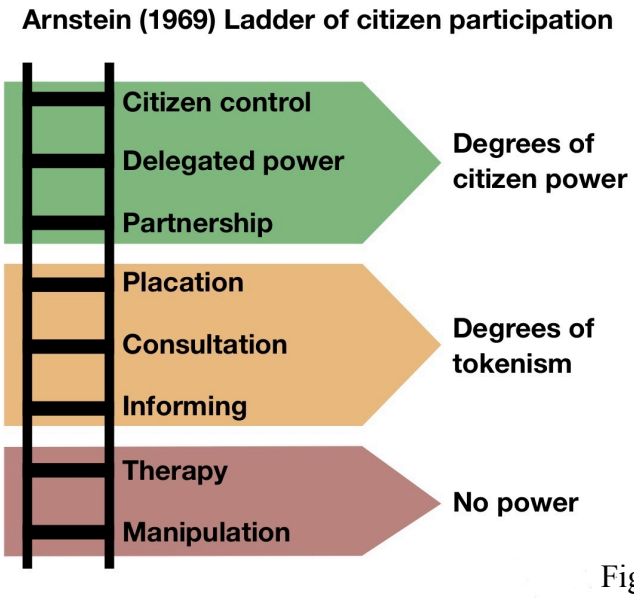

Figura 1

in government) share power with public officials in making substantive decisions related to a particular issue (Robert, 2008; Nabatchi, 2012).

Cornwall (2008) tried to "unpack some of the meanings that 'participation' has come to carry in the last decade and to explore the diversity of practices that are labelled as 'participatory'" (Cornwall, 2008); providing a series of ideal types, he categorized participation. In Arnstein's (1969) ladder of participation, "citizen control" appears at the top within the category of 'citizen power', while 'manipulation' is at the bottom in the category of non-participation' (Figure 1)[4]. Arnstein's ladder looks at participation from the perspective of those on the receiving end and she "draws a distinction between 'citizen power', which includes citizen control, delegated power and partnership, and 'tokenism', in which she includes consultation, informing and placation" (Cornwall, 2008). Pretty's (1995) typology of participation, instead, speaks more "to the user of participatory approaches" and is a normative typology going from 'bad' forms, namely "the inclusion of token representatives with no real power, which he characterizes as manipulative participation, to 'better' forms, such as participation by consultation and for material incentives" (Cornwall, 2008). Both Arnstein's and Pretty's typologies "describe a spectrum defined by a shift from control by authorities to control by the people or citizens", where "self-initiated mobilization may or may not challenge existing distributions of wealth and power" (Pretty, 1995). Therefore, as Cornwall pointed out, Pretty's typology explains that "the motivations of those who adopt and practice participatory approaches is an important factor in shaping interventions", and Arnstein's typology stresses that "participation is ultimately about power and control" (Cornwall, 2008).

Since "engagement is regarded as an important governance norm that can strengthen the decision-

[4] Cornwall A., (2008) "*Unpacking 'Participation': models, meanings and practices",* pp.270

making arrangements of the state"[5], it is consequent that citizens' voices should be heard and reflected back to transform the existing government policies (Chum et al., 2010). For this purpose, extensive technology support and information have to be made available to the public for discussion and participation, through a 'dialog' that "promotes the collaborative decision making process by including the public in the inception of new government policies" (Chum et al., 2010). Indeed, there are many tangible benefits that can be derived from an effective citizen involvement program (Cogan and Sharpe,1986), such as information and ideas on public issues, public support for planning decisions, avoidance of protracted conflicts and costly delays, reservoir of good that can carry over to future decisions, spirit of cooperation and trust between the agency and the public (Reddick, 2010). Moreover, although citizen participation programs can increase costs and the amount of time a project takes and can involve certain level of risk (Parker, 2002), as Cogan suggests, participation programs can make the planning process and planners more effective by "reducing isolation of the planner from the public, generating a spirit of cooperation and trust, providing opportunities to disseminate information, identifying additional dimensions of inquiry and research, assisting in identifying alternative solutions, providing legitimacy to the planning effort and political credibility of the agency and increasing public support" (Davis, 2010).

Caroline Moser (1983) suggested that a simple distinction could be made between "those development efforts which envisaged community participation as a means, and those which saw participation as an end in itself". Thus, when considering the benefits of citizens' participation, we should be aware that there are two different tiers of benefits: process and outcomes[6]. Moreover, it is important to stress the fact that there are two types of beneficiaries of citizens' participation: "On the one hand there are the Administrators, those who are either elected or appointed to public office, who benefit from more public-preference in decision making, and on the other, the citizens themselves, who benefit from better policy making and implementation and an appreciation of the wider community"[7]. An important work as been carried out by Irvin and Stansbury (2004), who, from an analysis of the advantages and disadvantages of citizens participation in decision making processes, proposed that "it is possible to set out indicators that show whether or not the 'right'

[5] People Matter, Civic Engagement in Public Governance. United Nations Report 2008

[6] TACSO- Technical Assistance for Civil Society Organizations (2011)

[7] TACSO- Technical Assistance for Civil Society Organizations (2011)

conditions exist for advantageous citizens' participation" (Irvin and Stansbury, 2004). The table below summarizes the advantages and disadvantages in decision making processes (Table 1)[8].

Advantages of Citizens' Participation in Decision Making Processes		
	Advantages to Citizen Participants	*Advantages to Government*
Decision Process	Education (learn from and inform government representatives) Persuade and enlighten government Gain skills in active citizenship	Education (learn from and inform citizens) Persuade citizens; Build trust and allay any fears or anxieties in the community Build strategic alliances Gain legitimacy of decisions
Participation Outcomes	Break possible gridlocks - achieve outcomes Gain some control over policy process Better policy and implementation decisions	Break possible gridlocks - achieve outcomes Avoid possible litigation costs Better policy and implementation decisions
Disadvantages of Citizens Participation in Decision Making Processes		
	Disadvantages to Citizen Participants	*Disadvantages to Government*
Decision Process	Time consuming (and even de-motivational) Waste of effort if input ignored	Time consuming Costly May backfire, creating more hostility to government
Participation Outcomes	Worse policy decision is heavily influenced by opposing interest groups	Loss of decision-making control Possibility of bad decision which is politically impossible to ignore Less resources available for the actual implementation of policy

Table 1

Irvin and Stansbury (Irvin & Stansbury, 2004) concluded that the increased participation from community in government decision-making produces important benefits in terms of visioning and foresight (Fitzgerald et al., 2016).

An important contribution on the evaluation of civic and political engagement has been given by Andolina et al. (2003), who "provided a detailed road map to a set of survey questions that comprise an index of civic and political engagement", discussed 19 different items used to measure active engagement, the dimensions that they capture and the ways in which they can be used by interested groups. They also provided an in-depth description of various issues that should be taken into account when using the index" (Andolina et al. 2003). The 19 items in the index represent a

[8]Forrester S., Sunar I. (2011) "*CSOs and Citizens' Participation",* pp. 30

broad range of activities across three different dimensions, which represent different arenas in which individuals can contribute to public life. The first five measure capture 'civic activities' and include organized voluntary activity, aimed at developing one's local community, addressing local problems and providing resources to the nonprofit sector. The next five measures are the 'electoral activities', which include voting and work related to campaigns and elections to support a party, candidate or cause. Finally, the nine items of the third dimensions entitled 'political voice' include activities people engage in to give expression to their political and social viewpoints. A fourth dimension is represented by 'attentiveness' and include activities through which people show their attention to current event and political happenings (Andolina et al. 2003). Table 2 summarizes the indicators and shows the percentage of the use of these indicators on the basis of the age (Table 2)[9].

Table 2

ALL	AGE:	15-18	19-22	23-25	15-25	26-37	38-56	57+
	Civic Indicators							
31%	Active member in group or organization.	25%	18%	23%	22%	29%	39%	27%
31%	General fund raising for charity.	31%	22%	30%	28%	29%	37%	26%
24%	Regular volunteering for a non-electoral organization.	27%	16%	22%	22%	25%	26%	19%
21%	Community problem solving.	25%	16%	21%	21%	22%	25%	15%
14%	Participating in fund-raising run/walk/ride.	16%	15%	17%	16%	16%	15%	8%
	Electoral Indicators							
51%	Regular voting (for age 20 and older).	--	21%	27%	24%	34%	53%	72%
33%	Persuading others to vote for a particular candidate or party.	38%	33%	35%	36%	33%	32%	32%
26%	Displaying campaign buttons, signs, stickers.	24%	15%	19%	20%	18%	28%	34%
13%	Contributing to a campaign, party or group.	3%	3%	7%	4%	11%	17%	17%
6%	Volunteering for a candidate or political organization.	3%	3%	2%	3%	5%	8%	6%
	Indicators of Political Voice							
38%	Boycotting.	33%	39%	45%	38%	43%	41%	28%
35%	Buycotting.	33%	34%	40%	35%	42%	37%	25%
23%	Signing written petitions.	15%	24%	23%	20%	23%	24%	21%
18%	Contacting officials.	9%	8%	14%	10%	16%	20%	21%
12%	"Signing" e-mail petitions.	12%	16%	16%	14%	15%	11%	9%
10%	Contacting the print media.	11%	9%	10%	10%	8%	12%	12%
8%	Contacting the broadcast media.	6%	9%	8%	7%	7%	10%	8%
4%	Protesting.	6%	8%	7%	7%	5%	3%	3%
2%	Canvassing.	2%	*	2%	2%	2%	3%	4%

ALL		15-18	19-22	23-25	15-25	26-37	38-56	57+
	Attentiveness Indicators							
60%	Watch television news regularly.	35%	31%	50%	38%	47%	63%	85%
46%	Read a newspaper regularly.	28%	32%	32%	30%	32%	48%	60%
45%	Follow government and public affairs "most of the time."	21%	23%	32%	25%	37%	50%	60%
33%	Talk "very often" about politics with family and friends.	19%	21%	27%	22%	28%	38%	35%

Since the aim of this paper is a further understanding of the relationship between citizen engagement and digital communication, a review on the literature on e-government, e-

[9] Andolina et al. (2003) "*A guide to the Index of Civic and Political Engagement",* pp. 3

governance and E-democracy in general is necessary. The next session will provide an exploration of the main studies on open government issues.

2.2 E-government and E-governance's definitions

Trust in government has been declining for more than three decades (Tolbert and Mossberger, 2006) and this "growing disconnection between citizens and decision-makers is pushing politics towards a re-shaping of institutional design" (De Blasio and Sorice, 2016). According to Norris "there is widespread concern that the public has lost faith in the performance of the core institutions of representative government and it is hoped that more open and transparent government and more efficient service delivery could help restore that trust" (Norris, 2001; Tolbert and Mossberger, 2006). In this context, e-government has been proposed as "a way to increase citizen trust in government and improve citizens evaluations on government generally" (Tolbert and Mossberger, 2006). E-government refers to "the delivery of national or local government information and services via the Internet or other digital means to citizens or business or other governmental agencies" (Palvia and Sharma, 2007). Many definitions have been provided by different sources. The World Bank defined e-government as "the use by government agencies of information technologies (such as Wide Area Networks, the Internet and mobile computing) that have the ability to transform relations with citizens, businesses and other arms of government. These technologies can serve a variety of different ends, such as better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information and more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth and cost reductions"[10] (Palvia and Sharma, 2007). The United Nations defined e-government as "utilizing the Internet and the world-wide-web for delivering government information and services to citizens"[11] (Palvia and Sharma, 2007). The definition provided by the Global Business Dialogue on Electronic Commerce states that "e-government refers to a situation in which administrative, legislative and judicial agencies (including both central and local governments) digitalize their internal and external operation and utilize networked systems efficiently to realize better quality in the provision of public services"[12] (Palvia and Sharma, 2007). Although e-government's definition varies on the

[10] Definition provided by www.worldbank.org

[11] Definition provided by www.unpan.org

[12] Definition provided by www.gbde.org

basis of the source, there is common themes; indeed, e-government "involves using information technology, and especially the Internet, to improve the delivery of government services to citizens, businesses and other government agencies. It enables citizens to interact and receive services from the federal, state or local governments twenty four hours a days, seven days a week". (Palvia and Sharma, 2007). Chun et al. (2010) studied the evolution of e-government as different stages "that describe the patterns of interactions of digital governments with the public" (Chun et al., 2010): the first stage focuses on 'digital presence' with simple information-providing Web sites of a passive nature, namely a digitalization of government information. The second stage provides simple Web-based interactions of governments with citizens, business and other government agencies through email contact and interactive forms that can dynamically provide information needed. The third stage provides online transaction services such as license renewal, permit applications and tax payments" (Chun et al., 2010). These first three stages are based on the "information delivery model" and the "public administrative process automation model", resulting in 7/24 access to government information and services (Chun et al., 2010). "The next stage is when the government promotes share governance to transform how the government operates, in terms of seamless information flow and collaborative decision making" and requires a meaningful dialog between the government and the citizens as well as among citizens themselves (Chun et al., 2010).

Classification of Funded GOL Projects

Attributes and sub-classifications	Number
Total number of projects	27
Focus	
E-government	27
E-governance	0
Centricity	
Government-centric	2
Customer-centric	14
Not enough data to classify	11
Vector	
Government to Business	11
Government to Citizen	9
Government to Business and Citizen	3
Government to Organization	3
Government to Government	1
Service/transactions versus infrastructure	
Service	17
Infrastructure	10

Table 3

Most government are taking initiatives offering government services online (Palvia and Sharma, 2007). As Marche and McNiven (2003) pointed out, "public sector organizations in North America and Europe are gradually transforming themselves as a consequence of opportunity pressure points created and enabled by Internet technologies", implementing transactional capabilities. In 1999, for instance, the Government of Canada launched a Government OnLine (GOL) initiative, seeking to turn Canada into "the most connected nation on earth" (Marche and McNiven, 2003) and approving a series of projects showed in Table 3 (Table 3)[13].

[13] Source Table 3: Marche and McNiven, 2003. *"E-government and E-Governance: The Future isn't what it used to be"*. pp. 84

In December 2009, US President, Barack Obama, launched the Open Government Initiative, whose "principles of transparency, participation and collaboration form the cornerstone of an open government" (De Blasio and Sorice, 2016). Through this initiative, transparency can be achieved by providing citizens with information about what the government is doing, which increased accountability; participation encourages the public engagement by increasing opportunities for the public to participate in policymaking and to provide the government with the collective knowledge and ideas. Finally, "the principle of collaboration demands partnership and cooperation among the federal government agencies, across all levels of government and with nonprofit organizations, businesses and individuals to improve the effectiveness of the government" (Chun et al., 2010).

In order to have a clearer idea of how the interactions between the "supply", namely governments and service providers, and the "demand", which includes citizens and civil society (Gigler and Bailur, 2014), work, it is important to separate the notions of e-government and e-governance. Indeed, "governance on the one hand and government on the other point to different aspects of the relationship between citizens and their political structures" (Marche and McNiven, 2003). Many definitions has been given to the concept of e-governance. Mache and McNiven (2003) defined it as "a technology-mediated relationship between citizens and their governments from the perspective of potential electronic deliberation over civic communication, over policy evolution and in democratic expressions of citizen will" (Marche and McNiven, 2003). This definition suggests that e-governance needs not to be limited to the public sector, but it implies "managing and administering policies and procedures in the private sector as well" (Palvia and Sharma, 2007). For the International Centre for E-Governance, it has broad implications, including "new models of policy formulation, new forms of citizenship, new patterns of relationship between citizens and power, new options for economic development, and the search for new ways to connect people with political processes"[14] (Marche and McNiven, 2003). The UNESCO defined e-governance as "the public sector's use of information and communication technologies with the aim of improving information and service delivery, encouraging citizen participation in the decision-making process and making government more accountable, transparent and effective. It involves new styles of leadership, new ways of debating and deciding policy and investment, new ways of accessing education, new ways of organizing and delivering information and services. Its objective is to engage, enable and empower the citizen"[15] (Palvia and Sharma, 2007).

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[14] International Centre for e-Governance

[15] Definition provided by www.unesco.org

In India a two-phase e-Governance projects has been applied; a first phase consisted in the use of IT for in-house government applications with a focus on central government requirements, such as defense, research, economic monitoring, planning, and certain data intensive functions related to elections, the conduction of the national census and tax administration. A second phase consisted in the implementation of the national IT Task Force and State Government IT policies, which symbolized a shift in e-governance policies towards using IT for a wider range of sectoral applications, reaching out to a large number of people in rural as well as urban areas (Madon, 2013). Moreover, India "instituted various forms of training programs to introduce e-governance within the public service"[16] (Sithole, 2015); according to the National e-Governance Plan of India, the e-governance training process was guided by the following model (Figure 2)[17].

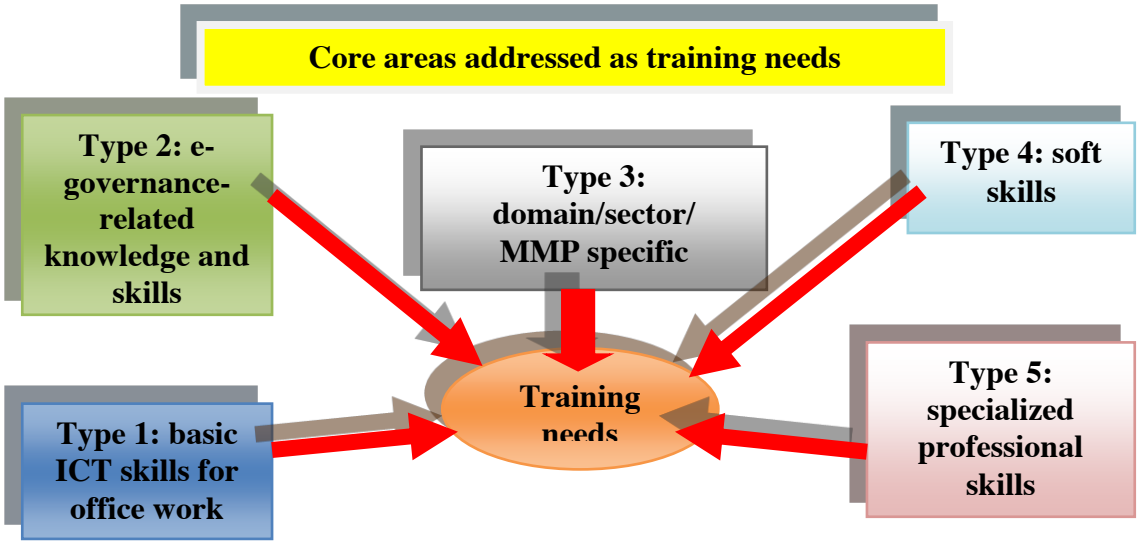


Figure 2

From the definitions and the projects reported above, it is evident that e-governance aim at introduce IT automation in individual government departments, improve transparency and accountability within government by introducing electronic file handling and public grievance systems, enhance the delivery of government services through information technology for a range of high volume routine transactions such as the payment of bills and tax dues to government, help people escape poverty by providing them with vital information on market prices and by helping them to make a living through entrepreneurial activity centered on ICTs (Madon, 2004).

[16] NeGP, 2014:55

[17] Sithole V. E. (2015) "*An e-governance training model for public managers: the case of selected Free State Provincial departments"*, pp. 4

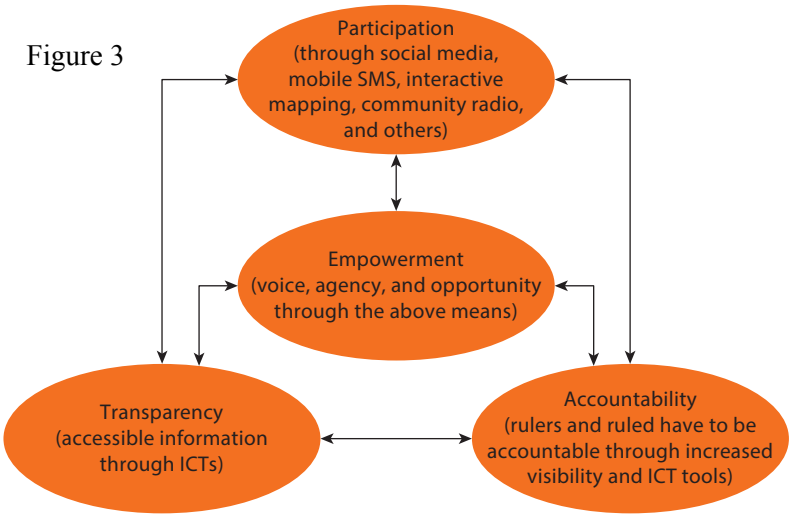
It is possible to conclude that information and communication technologies (ICTs) in general offer great opportunities for citizens not only to understand their rights and responsibilities but also to question governments when it appears that their rights are not being heard and for governments and other citizens to hold them accountable for their responsibilities. The potential of ICTs, indeed, have led to high expectations of technology as 'empowering' (Gigler and Bailur, 2014).

3. The Use of ICTs in Citizen Engagement Projects around the World

In the following chapter an exploration of citizen engagement projects through the use of information and communication technologies (ICTs) around the World will be provided. After a report of the main ICT's projects around the World, two states which adopted e-governance initiatives will be analyzed in detail (India and South Africa). Then, two particular projects will be reported. The aim is to identify the best practices and potential challenges in e-governance applications.

The application of ICT in government is becoming increasingly widespread and more sophisticated; its application is a "means of improving services governments render to communities" (Sithole, 2015). ICTs enable 'empowerment' through three main functions: "first, they enable downward flows of information, from government to citizen; second, they create the possibility of upward flows of information, from citizen to government, which are essential to inform decision making. Third, in theory, they enable horizontal flows of communication, flattening hierarchies". Moreover, ICTs can be considered as means of empowerment, that "can both support and be supported by participation, transparency and accountability". The four terms are interdependent and relational, but "the gain to one may be accompanied by loss to another -for example, participation may not necessary lead to empowerment, if participation is not welcomed or has unintended consequences" (Gigler and Bailur, 2014). Figure 3 illustrates the relationship between participation, transparency,

Figure 3



accountability and empowerment (Figure 3)[18].

As Pina, Torres and Acerete (2005) pointed out, the application of ICTs and the "emergence of networks, in which citizens, governments and the private sector form a web of relations" is bringing about a total 'reinvention' (Pina et. al., 2005; Sithole, 2015). Sharim and Islam (2013) conducted an e-governance survey at the Divisional Controllers of Accounts (DCA) in Bangladesh and identified seven main benefits associated with ICT applications, which are directly responsible to help improve the 'goodness' of governance in the country (Sithole, 2015). These benefits are: (1) transparency, allowed through the electronic monitoring; (2) accountability, through the use of ICTs for filling and record-keeping; (3) efficiency, possible through, for instance, the use of "e-journal Entry" which corrects the errors and saves time; (4) consensus-oriented, through the DCAO[19] websites on which citizens and service providers could lodge complaints and claim against any mismanagement; (5) responsiveness; (6) equity and inclusiveness, since all services provided through the ICT applications became inclusive; (7) participation, due to the fact that all role-players could participate in governance and get direct feedback from government through ICTs Sharim and Islam, 2013). The State of Tasmania (2011) supports the ideas of Sharim and Islam (2013) by stating that "ICT applications in government should be used to transform government service delivery". This is also supported by Kiula and Wafula (2014), who argues that "effective penetration and utilization of ICT in government operations is crucial to enhance effective and efficient services that satisfy the needs of citizens and other stakeholders" (Kiula and Wafula, 2014; Sithole, 2015). Also the Government Offices of Sweden (2014,) emphasizes the massive opportunities which ICT presents to governments who plan to improve services delivery to its communities. GOS[20] perceives ICT as playing a crucial role in development, democratization and the liberation of people in many parts of the world (Sithole, 2015). Wide ranges of e-governance projects are being implemented also in different parts of India and the Indian government has for the past three decades acknowledged that "expanded use of ICT in the public sector can offer important benefits such as improved planning, monitoring mechanisms, cost savings and more effective administration and delivery of certain public services" (Madon, 2004).

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[18] Assumed impact of ICTs on Empowerment, Participation, Transparency and Accountability.
Source: Gigler, B., and Bailur S. (2014) "*Closing the Feedback Loop: Can Technology Bridge the Accountability Gap?",* pp. 8

[19] Divisional Controller of Accounts Office

[20] Government of Sweden

These ICT-enabled solutions have helped governments to improve efficiency and transparency, reduce the high costs of delivery of public services and improve governments' reach to the under-served segments of society (Ojha and Pandey, 2014). Investments in e-Government projects across the globe are therefore growing significantly. In 2003, for instance, the Russian Federation launched a federal budget of 1.43 billion rubles for financing the e-Russia program (Mimicopoulos, 2004; Ojha and Pandey, 2014). Similarly, the e-Taiwan project launched in China earmarked NT$ 36.2 billion (US$ 1.04 billion) for its e-Government initiative to build a fully computerized society. In future, it is expected that India and China will drive the growth in IT spending in the Asia Pacific region (Mimicopoulos, 2004).

In the next sections, the main Indian e-Government and e-Governance initiatives will be reported; a particular focus will be given to the FRIENDS and AKSHAYA e-governance projects. Then, the South African e-governance's main policies aimed at helping improve South African service delivery will be discussed. Finally, two narrower projects, the "Check My School Project" in Philippines and the "Three out of Three Initiative" in Mexico will be reported. These last two analyses will be useful for our analysis since they show how regional networks, civil society organizations and national government agencies can effectively interact to promote and implement the quality of social accountability.

3.1 India: Case Study

India has taken great strides in promoting e-governance applications and today many different types of e-governance projects are being implemented. The main Indian government's aim is to "improve transparency and accountability by introducing electronic file handling and public grievance systems" (Madon, 2004). In India, indeed, many e-Government initiatives have successfully improved public services such as access to land titles, certificates and social pensions (Ojha and Pandey, 2014). Central government projects such as MCA21 from the Ministry of Corporate Affairs (MCA)[21] has enabled 100% electronic filing, electronic payment mechanisms, use of digital signature certificates for all transactions, delivery of more than 90% of services by MCA offices within the charter defined by the Ministry, significant increase in rate of compliance i.e. more than 90% of e-filing being done by stakeholders (as against the target of 25%), total transparency for service delivery, more than 40% electronic on-line payments, and very high level

[21] Source: The Department of Information Technology, Ministry of Communications and Information Technology, Government of India

of stakeholder satisfaction (Ojha and Pandey, 2014). Other central government initiatives that have been successfully implemented across India are Aadhaar for Citizen e-ID, Passport Sewa, MyGov, e-Office, e-District. It should be noted that "these e-government projects are not mere technology adoption projects and involve challenges related to organizational transformation, i.e. significant process re-engineering and organizational change management that result in new ways of working for the implementing organizations. New technologies and innovations in services require improvement of skills and professionalism of the work force, collaborative interaction with customers, and suppliers" (Ojha and Pandey, 2014).

The Indian experience in e-governance can be divided into two main phases. In the first phase, which lasted from the late 1960s/early 1970s to the late 1990s, "efforts to develop e-governance were concentrated on the use of IT for in-house government applications with a principal focus on central government requirements such as defense, research, economic monitoring and planning, and certain data intensive functions related to elections, the conducting of the national census and tax administration" (GOI, 1985; Madon, 2004). In the second phase, from the late 1990s onwards, "the implementation of the national IT Task Force and State Government IT policies symbolized a paradigm shift in e-governance policies towards using IT for a wider range of sectoral application, reaching out to a large number of people in rural as well as urban areas" (Madon, 2004). In addition, the Indian government has set up the Ministry of Information Technology that works with the Department of Electronics to achieve various e-governance objectives (GOI, 2000). Madon (2004) argued that "there is a need to develop measures that reflect what people in practice can or cannot do with the range of e-governance applications offered and the benefits they do or do not derive from them" (Madon, 2004). FRIENDS, an acronym for fast, reliable, instant, effective, network for disbursement of services, is a people-oriented project launched in June 2000 by the Kerala state IT Department and rolled out to all 14 districts in 2001. Each of the FRIENDS centers offers a one-stop IT-enabled payment counter where citizens can pay all their bills rather than having to personally visit individual department payment counters located in different parts of the city. A second people people-oriented project launched in October 2002 by the IT Mission of the Government of Kerala is AKSHAYA, aimed to bridge the digital divide in Kerala and to act as a catalyst for socio-economic development. The project has established 610 multi-purpose community technology centers, each with 5-10 computers. In the first phase of AKSHAYA, from October 2002 until January 2004, the centers acted as hubs for promoting IT literacy amongst villagers and enabled the entrepreneurs to recuperate 30% of their initial investment within the first

three months of the project. In the second phase, high speed Internet connectivity for all centers was established and more specialized computer training and training in other areas is being provided on a payment basis. Moreover, each AKSHAYA center has begun participating in one of ten revenue and employment generating e-commerce activities identified by the IT Mission team and by the entrepreneurs such as providing data management services to government and corporates, providing insurance and financial services, data entry or marketing services. In the future, AKSHAYA centers are intended to serve as a e-transaction centers or local payment centers with connection to the district FRIENDS office and entrepreneurs will be able to collect payment for bills from households in their area. The centers are also intended to serve as front-end e-Government cells with various government-related applications delivered to citizens. For example, local panchayats have started to work on providing birth and death data to the AKSHAYA centers for digitalization enabling easy duplication of certificates or the usage of birth and death data for other purposes. Over and above IT-related activities, the centers have created a space within which citizens can engage in as a social forum and to promote economic activities (Madon, 2004). The basic services provided by the AKSHAYA centers are described below (Figure 3)[22]:

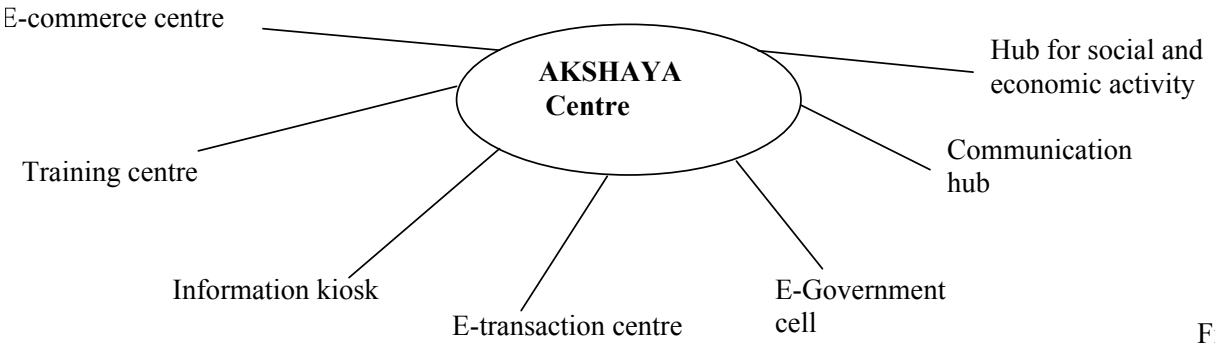


Figure 3

It is showed that a variety of functionings have been enabled through the establishment of these centers. With the FRIENDS projects, citizens have a real opportunity to pay bills without middlemen and this functioning is being extended through the AKSHAYA centers. It is important to underline that this push for having a single-window payment system came from the citizens themselves through resident association lobbies and other fora. Moreover, from the Madon and Kiran's (2002) survey on FRIENDS, they found that "citizen attitudes towards government are also

[22] Madon S. (2004) "*Evaluating the Developmental Impact of E-governance Initiatives: An Exploratory Framework",* pp.7

changing as a result of an increased sense of trust and reciprocity developing between citizens and state" (Madon, 2004). Indeed, with FRIENDS activities, the government is seen as being capable of providing a reasonable level of service without corruption. One of the main outcomes from the AKSHAYA project is for the citizens to be confident and 'empowered'. In particular, entrepreneurs have gradually built up confidence and networks to sustain their livelihoods and to generate local socio-economic activity. However, there are many challenges to completely achieve these functionings. First, the great expectation among citizens on the promotion of e-governance activities requires a lot of back-end administrative reform and cooperation from individual government departments. Moreover, with the growing 'liaisons' with enterprises and who may require data transaction services, there is a great deal of suspicion among panchayat members that the projects are a private conspiracy (Madon, 2004).

In conclusion it is possible to affirm that "India is one of many developing countries currently launching major e-governance projects aiming to improve government processes, connect government to citizens and build interactions within civil society". However, in a developing country like India, it remains uncertain as to what contribution, if any, e-governance initiatives can make to overall development priorities (Madon, 2004).

3.2 South Africa: Case Study

In 2001 the Department of Public Service and Administration (DPSA) of South Africa developed an e-governance policy as part of its overall program to help improve service delivery (Naidoo, 2012; Sithole, 2015). Naidoo (2012) asserts that the e-governance endeavors require some in-house champions to undertake planning and to oversee training and developments (Sithole, 2015). Because of the new dispensation in 1994, the South African telecommunications and postal services sector has been guided and regulated by separate and divergent policies and frameworks (Van Zweel and Grill, 2014). Moreover, the South African Department of Communications is reviewing all policies impacting on ICT (Duncan, 2014; Sithole, 2015) and the National Integrated ICT Green Paper, an attempt to revamp current out-dated ICT policies, has been published in January 2014. The formulation of the ICT Green Paper was established on the basis of two main convergences (Carrim, 2014)[23]: (1) technological convergence, which entails technological systems' tendency to develop in a manner that allows them to perform the same tasks; (2) platforms, which refer to (a) applications and services, including the shift to Internet Protocol (IP)-based technologies which

[23] The former Minister of Communications

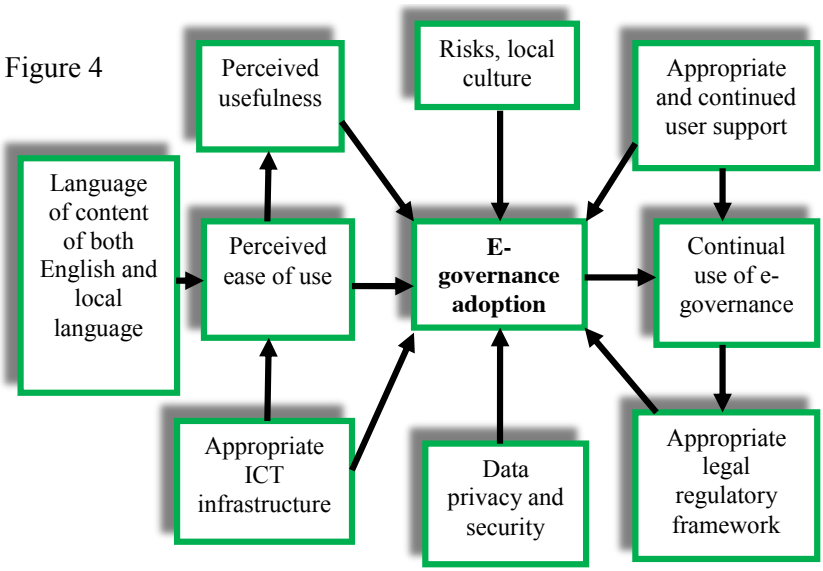
have affected the cost of networks and offer opportunities for innovation, (b) the deployment of fibre-optic technologies that have increased the speed and size of data that can be transmitted, (c) the use of wireless technologies. The First Africa Initiative (2014) declares the purpose of the South African ICT Research and Development (R&D) strategy as to create an enabling system by which to advance ICT innovation and outlines the following 2015 ICT vision: "South Africa is an inclusive information society where ICT-based innovation flourishes. South Africa has a strong national ICT brand that captures the vibrancy of and industry and research community striving for excellence, characterized by innovative approaches to local and global challenges and recognized for its contribution to the economic growth and well-being for our people and region (First Africa Initiative, 2014). Moreover, it asserts that the key ICT Research and Development strategic objectives are: (1) develop focused and strengthened ICT research activities to achieve world-class research competencies in identified key S&T areas; (2) build a strong and robust innovation environment, with an indigenous ICT sector that is competitive and growing; (3) build advanced human capital (ICT skills base) for research and industry, as well as the proliferation of ICT in other sectors of the economy (Sithole, 2015).

South Africa is not new to the implementations and applications of e-governance and there are many models of e-governance initiatives either suggested or implemented in some areas of the country. The United Nations Development Program (UNDP, 2014), for instance, presents the web Presence Measurement Model for Southern African countries, which provides an efficient web-based public service implementation according to five stages: (1) the emerging web presence, which has a dormant website for posting information on different activities; (2) the enhanced web presence, which creates and links together websites, providing citizens access to information across ministries; (3) the websites, which provides dynamic, specialized and regularly updated information; (4) the transactional stage, where buying and selling products takes place online; (5) the seamless web-presence stage, in which governments use single and universal websites to provide a one-stop portal in which users immediately and conveniently can access all types of available services.

Bwalya (2010) outlines a theoretical e-governance model for the Southern African Development Community (SADC) and pointed out that in the case of SADC, the contextual environment is similar in most of the countries that belong to this regional grouping including South Africa. Figure 4 depicts Bwalya's conceptual model (Figure 4)[24].

[24] Bwalya's e-Governance conceptual model for the SADC region- Source: Bwalya (2008:30)

Figure 4



The operations of the Bwalya's (2008) proposed e-governance conceptual model involve: (1) *perceived ease of use*, which will positively influence the perceived usefulness of such websites and applications; (2) *perceived usefulness of e-governance*, which will positively influence citizens's adoption of the websites and applications; (3) *appropriate ICT infrastructure*, which will allow access to basic technologies and will impact positively on usability and correspondingly on perceived ease of use; (4) *language of content,* which will have a positive impact making the use of e-governance websites and other e-applications less complex; (5) *appropriate legal authority,* to eliminate forms of corruption and problems related to privacy and security risks (Sithole, 2015).

It is important to underline that South Africa's rating for ICT implementations is 0.39%, compared to the world average rating of 0.45%. This is an indication of the relative high levels of commitment of the South African Government to the applications of ICT for e-governance, although there is still more to be done when compared to the North American region with an average of 0.84% (Sithole, 2015).

Two examples of successful e-governance projects in South Africa are reported by Coleman (2014), who underlines the fact that the government is proceeding pragmatically and incrementally towards e-governance and that they are doing so within a framework of established good practices and strategically-articulated objectives (Sithole, 2015). The Cape Gateway Portal provides web-based information about government services and departments, structured according to users' life events. The Independent Electoral Commission voter-registration system is a satellite-enabled network which helps the Commission to register voters; it also relays, collects and verifies ballots and relays election results around the country (Coleman, 2014; Sithole, 2015).

From the above analysis, it is evident that South Africa has adopted the use of ICTs to improve e-governance and that the ICT utilization is perceived as inevitable in improving services that the

government renders (Sithole, 2015). The “South African National Development Plan: Vision 2030” proposes the phasing of priorities for the development of the sector into short-, medium- and long-term investment strategies (Mc Connachie, 2011; Sithole, 2015). In the *short-term ICT investment strategies* (2012-2015) there is a need for a policy review of the ICT sector, the development of a more comprehensive and integrated e-strategy; the aim is to create a common carrier with open access policies to ensure access to service competitors. For the *medium-term ICT investment strategies* (2015-2020) the National Development Plan supports the target of 100% broadband penetration by 2020. Finally, in the *long-term ICT investment strategies* (2020-2030) the collaboration between the state, industry and academia should create innovation systems, including software and application incubators, local content and multimedia hubs, as well as networks for research and development (Sithole, 2015). Furthermore, the National Planning Commission (NPC) (2011) asserts that the improvement of economic infrastructure also involves the improvement of ICT infrastructure, changing the regulatory framework to ensure that Internet broadband capacity improves, prices drop significantly and access improves (Sithole, 2015).

Although the initiatives reported above are useful and applicable, they are only future plans which have not been applied yet. It is important, therefore, to report an evaluation of the current ICT initiatives in South Africa. The South African Government has formulated an ICT policy with government-to-citizen communications as its main objective, through the adoption of the Governmental portal “www.gov.za", as a means to ensure citizen’s participation, interaction and good governance. As a form of ICT advancement in South Africa, the South African Government National Infrastructure Plan (SAGNIP) (2012) on ICTs and development aimed at transforming the country’s economic landscape, whilst simultaneously creating significant numbers of new jobs, and strengthen the delivery of basic services. The Gauteng ICT Development Draft Strategy (2014) developed the ICT strategy for the Province aimed at increase ICT in order to improve service delivery and create employment. This strategy is informed by the objective that seeks to create connectivity to every household, Small, Micro and Medium Enterprises (SMMEs), communities, government institutions (schools, clinics, etc.) and citizens across Gauteng. The objectives used to measure the success of this strategy are (Gauteng ICT Development Draft Strategy, 2014): (a) provide universal access to broadband for citizens, business and government institutions; (b) build the Network Infrastructure and Information Super-highway to encourage the development of advanced workforce with better ICT skills; (c) enhance economic productivity through ICT infrastructure development in order to lower the cost of doing business and increase connectivity for

companies; (d) increase the ICT skills capacity within the public and the private sectors to create a pool of ICT practitioners and entrepreneurs; (e) improve service delivery by providing high-quality ICT services through e-government; (f) build an economic and industrial sector with a focus on ICT and, in particular, software industry; (g) ensure that innovation becomes part of the economic network in Gauteng Province in relation to ICT; (h) reduce the carbon footprint of the province through Green ICT; (i) create employment in the ICT sector.

The Democratic Alliance (DA) (2013) asserts that South Africa is a healthy, effective and enterprising nation that utilizes ICTs to: (a) educate every child and adult to fulfill their potential as engaged citizens; (b) ensure that the ICT infrastructure, the devices that access it and the services conveyed on it are affordable, competitive, reliable, efficient and readily available; (c) incentivize and regulate the ICT market to ensure affordable and competitive provision and access to these communications networks, tools and services throughout South Africa; (d) incentivize and encourage development of ideas into internationally competitive, marketable products and services, job-creating entrepreneurship and business opportunities throughout the country; (e) deliver citizen-centric services that address everyday needs including health care, education, government transactions and interactions; (f) provide platforms for communication between all who live in South Africa; (g) facilitate and protect efficient and profitable commercial activity both locally and abroad; (h) engage citizens in the formulation of policy and developing systems that continually improve government responsiveness to their needs.

It is important to report also that South Africa On-Line (2011) indicates that South Africa has the most developed telecommunications network in Africa with networks that include the latest fixed-line, wireless and satellite communication technology (Sithole, 2015). Moreover, Mcilhone (2014) states that ICT growth in South Africa is characterized by (a) organizational links across sectors which scale investments in basic ICT infrastructure, (b) strong demand seen for technologies that help organizations to automate processes, managing complexities and drive down costs, and (c) high demand existing for mobility solutions.

In the next paragraph the Check My School (CMS) Project will be reported. This model assumes that community-driven data validation and easy access to data via the Internet will “enable government officials and citizens to highlight issues of concern and identify potential solutions” (Shkabatur, 2014).

3.3 Check My School Project in Philippines

An important contribution to the study of the relationship between the use of ICTs and citizen participation has been given by Shkabatur (2014), who sought to demonstrate "how technologies enhance access to information, participation, collaboration, and empowerment"(Gigler and Bailur, 2014). In particular, she explored "multiple ICT initiatives that aim to engage citizens in governance and examines two principal questions: To what extent are technologies an accelerator in closing the accountability gap? Under what conditions does this occur?" (Gigler and Bailur, 2014). She studied 'Check My School' (CMS), a community-monitoring project that aims at promote transparency and social accountability in the Philippine public education sector by tracking the provision of services in public schools. This case study sheds "light on the design and implementation of the first pilot cycle of CMS, which took place during the school year of 2011–12" (Shkabatur, 2014). The initiative was initiated and designed by the Affiliated Network for Social Accountability in East Asia and the Pacific (ANSA-EAP), a nonprofit foundation hosted by the Ateneo School of Government at the Ateneo de Manila University. With funding from the World Bank's Development Grant Facility and support from the World Bank Institute, ANSA-EAP provides opportunities for civil society organizations (CSOs) and local and national governments to learn from one another's experience in implementing social accountability initiatives. CMS is an innovative social accountability platform that uses open data to promote citizen participation in the monitoring of public school performance and aims to improve the provision of services in public schools by pursuing three major objectives: (1) data validation, namely enhance the integrity and accuracy of DepEd school data by gathering information in schools across the country and comparing the data collected to official DepEd data; (2) community engagement, increasing community awareness and involvement in the provision of education services by monitoring the conditions of public schools and engaging community members in collaborative problem solving; and (3) information provision, facilitating public access to accurate information about the public education system (Shkabatur, 2014). Indeed, CMS is based on the 'constructive engagement' principle, namely "engage citizens and government agencies in monitoring public service provision, facilitate dialogue and use collaborative problem solving" (Shkabatur, 2014). Specifically, CMS provides Department of Education (DepEd) with a data validation tool that complements its Basic Education Information Services (BEIS) system and a problem identification mechanism that can assist DepEd in improving its performance in public schools across the country. Moreover, the CMS project offered ANSA-EAP an opportunity to explore the integration and use of ICT tools in citizen monitoring. Although various government agencies in the Philippines have not yet taken advantage of this facility in a

more programmatic and systematic manner (ANSA-EAP 2011, 5), ‘checkmyschool.org', the online CMS platform, helped to fill this gap. Indeed, “ANSA-EAP created a platform consolidating all of the available government data on the public education system in the Philippines, posted the data it obtained from DepEd and instructed infomediaries to upload the information they collected during school validations”. The platform was supposed to include key indicators and measures of performance and to present official data from DepEd alongside data validated by CMS; it aimed to facilitate community engagement around education issuers to post feedback about different schools and respond to emerging issues (Shkabatur, 2014).

The main findings proved that: first, impactful ICT for social accountability initiatives requires a dedicate CSO leader, who would tailor the intervention of local sociopolitical conditions, customizing the ICT design of the initiative, building capacity, addressing technological challenges, mobilizing resources, leading implementation of the project and ensuring its sustainability. Second, a constructive engagement approach, which emphasizes the need to engage public officials and civil society groups in a sustained dialogue and collaborative problem solving can have more of an impact for the long term. Third, capacity building should be an integral part of the project design, development and implementation. Fourth, the ICT-related components should be considered carefully (Shkabatur, 2014). It is important to stress the fact that “the incorporation of ICT in societies with low rates of Internet penetration and lack of technological skills is particularly difficult” and that “the CMS experience shows the need for versatility and flexibility in integrating ICT tools in citizen-monitoring projects”. Indeed, using ICT in pilot activities proved to be challenging in the Philippines, where the Internet penetration is estimated at around 30 percent and where ICT literacy is relatively low (Shkabatur, 2014). Furthermore, technical problems, such as difficulties in uploading data and errors in loading pages, slow speed and lack of user-friendliness prevented infomediaries from using the website effectively. Figure 4 shows the problems encountered in using the CMS Website (Figure

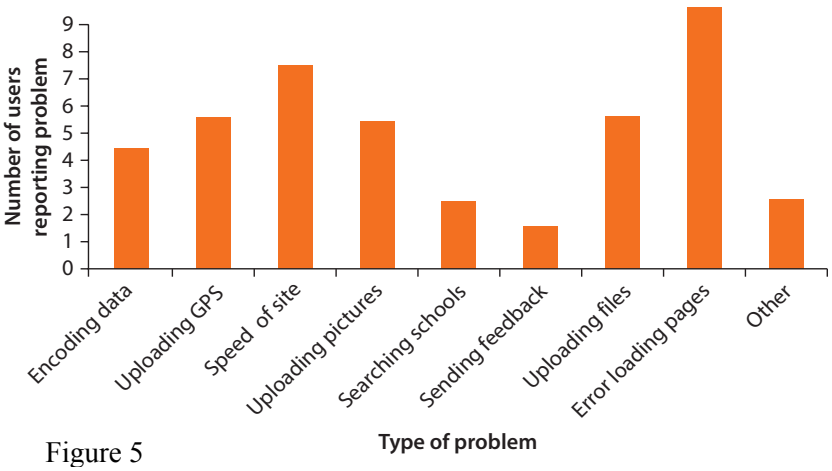


Figure 5

5)[25].

From this case study it is possible to conclude that "skillful and organized collective action is the prerequisite for the effective use of information provided on the CMS platform". Indeed, "the challenge may be one of capacity: local communities may not have sufficient Internet access or technological skills to access and use information on the platform and even if technological capacity exists, communities may be unaware of their rights or reluctant to use the information to confront persons in authority or engage in negotiations with them" (Shkabatur, 2014). The challenge of providing access can be addressed in at least two ways: social mobilization and mobile penetration.

3.4 Three out of Three Mexican Initiative

Although the current conditions in Mexico create significant challenges for building citizen participation, there is strong potential for investing in participatory work. In particular, corruption in the government is commonplace and cynicism among the population about the trustworthiness of government has deep historical roots. The concentration of power in the hands of the few- the PRI regime, powerful drug cartels and wealthy elites- created conditions in which citizens had and felt increasingly less agency over conditions in Mexico and came to believe through experience that their voices carried little power (Gun et al., 2015). In this context, the potential of the technology to deliver online information and services to citizens is a strong instrument to overcome these problems. The application of electronic means to improve the interaction between government and citizens and to increase the administrative effectiveness and efficiency of the government operations is an essential tool to increase citizens' trust in the government. Indeed, Internet technology enables to bring more transparency in governance and many benefits to the e-governance community (Ramadoss and Palanisamy, 2015). Creating spaces for practitioners to connect, exchange best practices and fund initiatives that have room to experiment, fail, learn and iterate can unlock somehow Mexico's potential. Some official framework for participation exist, but by and large they are not well publicized and most citizens do not know about or use them. Moreover, although the Mexican government occasionally creates mechanisms for citizen participation or announces large participatory initiatives, such opportunities for participation are generally very-high barrier for everyday Mexicans. For example, the Federal Government announced an open consultation and participatory process for citizens to send proposals for the National Government Plan 2013-2018, but most citizens would be unlikely to formulate such a far-reaching proposal for the entire country,

[25] Results of a Survey completed by CMS Infomediaries, October 2011

either due to a lack of expertise or a lack of time (Gun et al., 2015). Furthermore, some interviewees shared negative experiences with contributing proposals to the National Government Plan receiving no response; these practitioners felt very discouraged and disinclined to participate again in government-led initiatives.

It is important to remember that Mexico is one of the eight founding countries of the Open Government Partnership (OGP), which has a three part governing system shared by the Ministry of Public Administration, the Information Commission and a coalition of civil society organizations. The Progress Report 2011-2013 showed some advances in terms of transparency and accountability, but it also denounced a slowdown in information initiatives during Pena Nietos's administration (Gun et al., 2015). However, there are some legitimate windows of opportunities for CSOs to work in partnership and for citizens to participate in experimental government-led initiatives. One example is the "Laboratorio para la Ciudad" (Lab for Mexico City), which is "a space for rethinking, reimagining and reinventing the way citizens and government can work together towards a more open, more livable and more imaginative city" (Gun et al., 2015).

"3de3" ('Tres de Tres' or 'Three out of Three') is a Mexican participatory initiative that aims to rebuild citizens' trust in the Mexican government and increase transparency among politicians (Gun et al., 2015) by asking candidates for full disclosure of financial, inheritance and conflict interest information. During the 2015 election period, 40.000 people visited the 3de3 website daily and eight out of nine Governors public their disclosure information (Gun et al., 2015). The 3de3's demand for disclosure of information is simple, clear, easily actionable and directly confers immediate benefits to voters. Moreover, the project was backed by strong organizations (IMCO and Transparencia Mexicana), who worked in partnership with more than twenty CSOs and media allies to create and publicize the platform and campaign.

The succeed of 3de3 indicates that public attention on corruption can be channeled into participation with a strong campaign concept. Indeed, participants were able to be motivated by the obvious benefits of learning more about candidates and by the candidates' ability to easily respond to the campaign's demand. A key challenge for 3de3 will be to find ways to keep participants engaged and government officials influenced in amore sustained way outside of election period (Gun et al., 2015).

The study shows that there are clear opportunities to increase citizens participation in Mexico by scaling existing initiatives, launching others and using ICTs as means for connections between government and citizens.

4 Indicators to measure ICT's success and citizen engagement

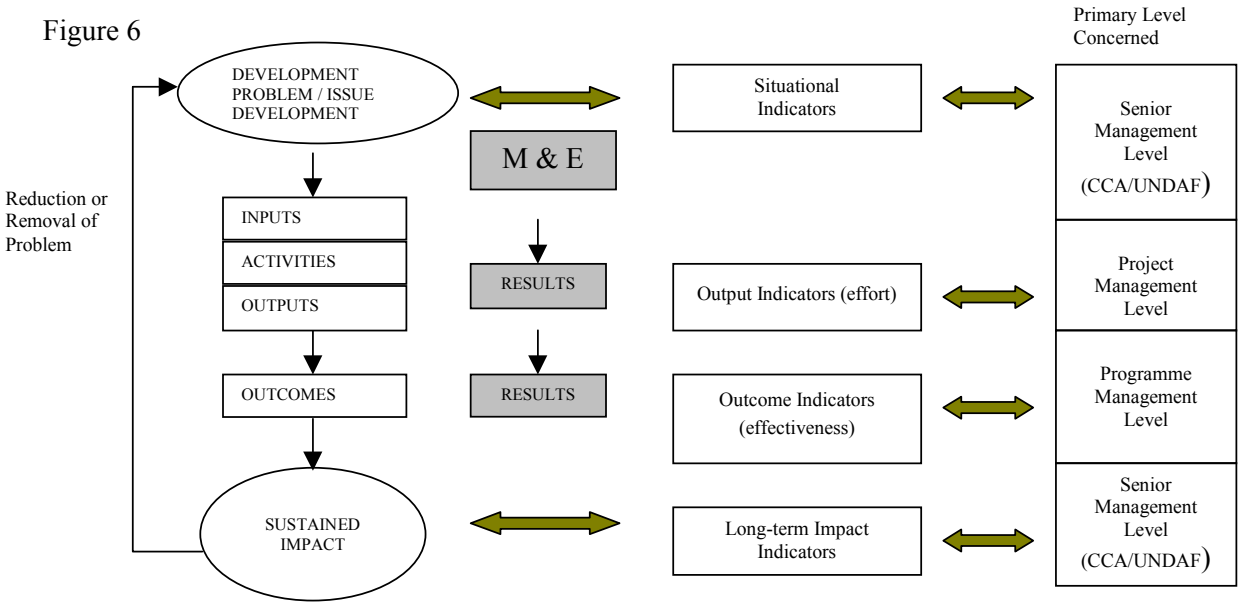
Indicators are signposts of change along the path to development and are what we observe in order to verify whether and to what extent it is true that the progress is being made towards a certain goal (Sandhu-Rojon, 2015). An indicator can be defined as "means of measuring what actually happens against what has been planned in terms of quantity, quality and timeliness, namely a quantitive or qualitative variable that provides a simple and reliable basis for assessing achievement, change or performance" (Sandhu-Rojon, 2015). Indeed, indicators make it possible to demonstrate results and help in producing results by providing reference point for monitoring, decision-making, stakeholders consultations and evaluation. In particular, by verifying change, they help to demonstrate progress when a project is good-performing and provide warning when a project is not successful.

To better understand the relationship between Information and Communication Technologies (ICTs) and citizen engagement, an analysis of the core indicators used to measure "e-readiness", namely "how well a society is positioned to utilize the opportunities provided by ICTs" (Ojo et al., 2007), and "active citizenship", namely the "participation in civil society, community and political life, characterized by mutual respect and non-violence and in accordance with human rights and democracy" (Hoskins, 2006) is essential. Indeed, "evaluation is an important step to institutionalizing quality citizen participation programs" and "effective evaluation can enable managers and agencies to improve public participation programs and ensure that they are useful, cost-effective, ethical and beneficial" (Nabatchi, 2012). These kinds of report, indeed, can provide effective strategies for assessing citizen participation programs and have the potential to improve public managers' ability to execute such evaluations (Nabatchi, 2012).

United Nations Development Program (UNDP) uses three types of indicators, also known as results indicators: (1) situational (impact) indicators, which provide a broad picture of whether the change is actually occurring; (2) outcome indicators, which assess progress against specified outcomes; (3) output indicators, which assess progress against specific operational activities. Figure 6[26] illustrates the linkages between the three types of indicators and highlight the level of management (project, program or senior country office) that would find a particular type of indicator most useful (Sandhu-Rojon, 2015). It is important to underline the fact that indicators only indicate and that they do not explain; therefore, indicators constitute only one part of the logical and

[26] Ruby Sandhu-Rojon, UNDP

Figure 6



substantive analysis needed for development efforts to succeed (Sandhu-Rojon, 2015). It is consequent that the use of indicators has to be placed within an elaborate analysis of causes and consequences which have favored or disadvantaged the hoped development.

Many researches into ICT acceptance have been concerned with how and why people adopt new technologies. Moreover, e-Government strategies have been increasingly examined and questioned (Verdegem and Verleye, 2009). The Canadian "Citizen First Survey" (Roy, 2006), the "Use of and Satisfaction with E-Government Services studies from the Australian Government (2005) and the "E-Government Trend-barometer" (Fachhochschule and Unisys, 2005) are examples of attempts to investigate the needs, perceptions and experiences of users towards technology and its applications (Verdegem and Verley, 2009). A lot of studies in user satisfaction stress the importance of the relationship between attitudes and perceptions towards the usage of electronic services. MORI (2002), for instance, elaborates on the role of expectations and states that if the experience of the service greatly exceeds the expectations clients had of the service, the satisfaction will be high and vice versa (Verdegem and Verley, 2009). The same line of reasoning is behind SERVQUAL, a multiple-item scale for measuring perceptions of service quality, originated by Parasuraman et al. (1988) and CMT (Common Measurement Tool) developed by the Canadian Institute for Citizen-Centered Service (ICCS, 2003). They highlight the differences between expectations and experiences, as this difference is perceived to be the key for understanding the fulfillment of public services. They also consider the role of surrounding factors, such as experience and intensity of use, as they can be used in order to introduce process improvements (Verdegem and Verley, 2009). The European IST research project eUser (2004) puts much attention to the design and delivery of user-

centered online public services (E-Government, e-health, e-lerning). Van Dijk (2008) have tested a model for explaining the acceptance and use of electronic government services, adapting a multi-disciplinary model comprising elements of both demand side as supply side to the Unified Theory of Acceptance and Use of Technology (UTAUT). The results showed that "the supply of E-Government services is a precondition for people to develop the intention to use these services" and the "E-Government acceptance should be seen as a dynamic learning process whereby people will stick to their habits of using traditional (offline) public services unless they learn of a better electronic alternative that is offering real added value" (Verdegem and Verley, 2009).

Similarly, many attempts to measure concepts such as active citizenship, political participation and citizen engagement have been made. Nabatchi (2012), for instance, created an "impact evaluation guide" which identifies key questions and relevant indicators that can be used to track the impact of participatory programs on institutions and policy change and to determine whether a program achieves its goals and produces its intended effects. She states that numerous criteria of a good participatory process can be suggested; they include fairness, legitimacy, transparency, visibility, accessibility representativeness, objectivity, credibility and adequacy. However, the breadth of norms about what constitutes a good process makes developing evaluation questions difficult. Examples of impacts and outcomes individuated by Nabatchi are "inform", "consult", "involve", "collaborate", and "empower" (Nabatchi, 2012). Another important contribution on the study of the efficiency of citizen engagement's projects has been given by Andolina et al. (2003). They created an index of civic and political engagement, providing a map to a set of survey questions and identifying 19 different items used to measure active engagement. Each of them captures different dimensions and can be used by interested groups[27].

The following sections report two of the main "measurement models" for investigating user satisfaction of online public services, building compositor indicators of active citizenship and evaluating citizen participation. Section 4.1 will summarize the model for measuring user satisfaction the in context of e-government, made by Verdegem and Verley in 2009. The, Section 4.2 will report the process of the construction of the Active Citizenship Compositor Indicator (ACCI), made by Hoskins et al. in 2006.

4.1 How to measure user's e-Government satisfaction

[27] See Table 2 for a further understanding

An important contribution to the study of the functioning of e-Government has been given by Verdegem and Verley[28] (2009), who developed a "comprehensive model for measuring user satisfaction in the context of E-Government" (Verdegem and Verley, 2009). They carried out both quantitative and qualitative researches in order to elaborate the model and to formulate adequate indicators for measuring user satisfaction. The model has been tested using data from five Flemish E-Government websites and the structural equation modeling (SEM) was applied in order to investigate the goodness of fit of the model and the underlying indicators. Their study's goal was to "meet the call for a more thorough understanding of citizens' needs and expectations towards E-Government" (Verdegem and Verley, 2009). The model is based on a research track concerning the needs and preferences of citizens towards electronic service provision and consisted of a quantitative research (large-scale survey, n=1651) as well as qualitative in-depth research (focus group interviews, n=28). Afterwards, the model has been validated by advanced statistical testing (structural equation modeling, SEM) based on a sample of 5590 respondents. The results led to the reduction of the measurement instrument (consisting of satisfaction indicators of online E-Government services) to a short list of nine indicators, still covering the full conceptual model.
It is a matter of fact that electronic public services have been often primarily guided by supply side factors (Bertot & Jaeger, 2006; Reddick, 2005b; Kunstelj et al., 2007; Gareis et al., 2004; (Verdegem and Verley, 2009). However, it is essential for public services to "evaluate the impact of their strategies on the customers (citizens and business) and to consider the new emerging needs and expectations for electronic services" (Verdegem and Verley, 2009). In this context, the tendency to progress to a more user-oriented E-Government approach has been developed and it can be stated that "a user-centric approach should be and integral part of governmental e-strategies" (Verdegem and Verley, 2009). The reported study is carried out through a user-centered perspective and responds to the need for more demand side oriented impact studies.

The starting point for the model explains the basic conceptual framework for measuring user satisfaction of online public services. It considers the different phases that the user of E-Government services must undergo (Verdegem and Verley, 2009). It starts with the individual reactions to (using) e-government; then five steps can be distinguished: (1) awareness: the user must be aware of the existence of electronic public services; (2) intention to use: the user will develop the intention to use e-government services; (3) access, phase which points the attention not only to the

[28] During their research they received support from Research Group for Media and ICT (MICT) — Department for Communication Studies, Ghent University (UGent) — Interdisciplinary Institute for Broadband Technology (IBBT), Belgium

accessibility of e-government services, but also to the problem of digital divide; (4) usage, phase in which the user arrives when he/she has developed the intention to use the service and has gained access to that service; (5) (dis)satisfaction.

As mentioned above, the first phase of the research project consisted of a large-scale quantitative survey in which data were collected in 2006 in Flanders by a combined online panel (73.6%) and offline data collection (26.4%) resulting in a total sample of 1651 respondents. Respondents were well divided across different categories (gender, age, level of education) and were asked about their possession and usage of ICT. Furthermore, they were asked about their knowledge of and attitudes toward e-government. The respondents have been confronted with a list of 15 indicators, related to functionality, accessibility and usability, and they were asked to rate the indicators on an 11-point Likert scale (varying from "not important at all" to "very important) in terms of their perceived importance. The results showed that the importance (mean) scores are close to one another and, therefore, that all of the following determinants are important for citizens and have to be taken into account in the measurement of satisfaction: "reduce the administrative burden" (Mean=8.79; SD=1.41), "reliability" (Mean=8.63; SD=1.61), "usability" (Mean=8.55; SD=1.58), "cost effective" (Mean=8.54; SD=1.68), "ease of use" (Mean=8.52; SD=1.68), "security" (Mean=8.50; SD=1.79), "content readability" (Mean=8.46; SD=1.77). "Privacy/personal information protection" (Mean=8.37; SD=1.86), "courtesy" (Mean=8.34; SD=1.71), "content quality" (Mean=8.30; SD=1.68), "transparency" (Mean=8.29; SD=1.68), "responsiveness" (Mean=8.23; SD=1.71) and "accessibility" (Mean=8.20; SD=1.62).

The second phase consisted in a qualitative research which dealt in an exploratory manner with several questions about the users' views on government and electronic public services. In 2006, three focus group interviews with a total of 28 heterogenous respondents were organized. Data were analyzed using the constant comparison technique (Glaser & Strauss, 1967). The results are not positive: they showed that "most citizens consider the information given by the government as incomplete, unclear and unreliable". According to the respondents, although E-government has potential in the future, it is currently considered unsafe and to offer too little in return: " since government authorities have a lot of information at their disposal, they could develop a more pro-active service delivery". The determinants which were often mentioned by all the respondents as having a decisive impact on satisfaction with electronic public services are: communication about services, recency of information, security, help or guidance, personal contact and centralization/ integration. The indicators have been clustered in three groups: (1) *access to the service*: the

respondents stress that services must be easily findable, and therefore that more information and communication about the services is needed; (2) *usage of the service*: the available information must be easily comprehensible, reliable and up-to-date; (3) *impact of the service:* the respondents stress that the reduction of the administrative burden is strongly connected to the implementation of customer-friendly services. Figure 7 shows the key and sub-indicators for access and usage; it is the result of the coding process of the interview data. Indicators with '+++' are perceived as the most important, followed by '++' and '+'(Figure 7)[29].

Finally, in the third phase of the research, the theoretical measurement model was brought into practice in order to investigate the goodness of fit between the perceptions and the actual satisfaction of citizens towards E-Government services. The indicators have been turned into measurable variables and integrating into a questionnaire. A pre-test was conducted within a group of 10 respondents who gave feedback for further elaboration or refinement of the measurement tool. Next, the questionnaire was evaluated by a team of E-Government experts (employees of CORVE[30]). Finally, in order to assess the fit of the conceptual model, structural equation modeling (SEM) was applied. Indeed, SEM offers a sub model (measurement model) to test assumptions regarding the strength of the relationships between indicators (items in the questionnaire) and the latent variables (the concepts), with simultaneous estimation of the correlations between the concepts. In total 5590 respondents were willing to participate in the study. Figure 10 shows the measurement model estimated with SEM; the concepts that were measured are represented by ellipses, while the observed variables (items in the questionnaire) are represented by

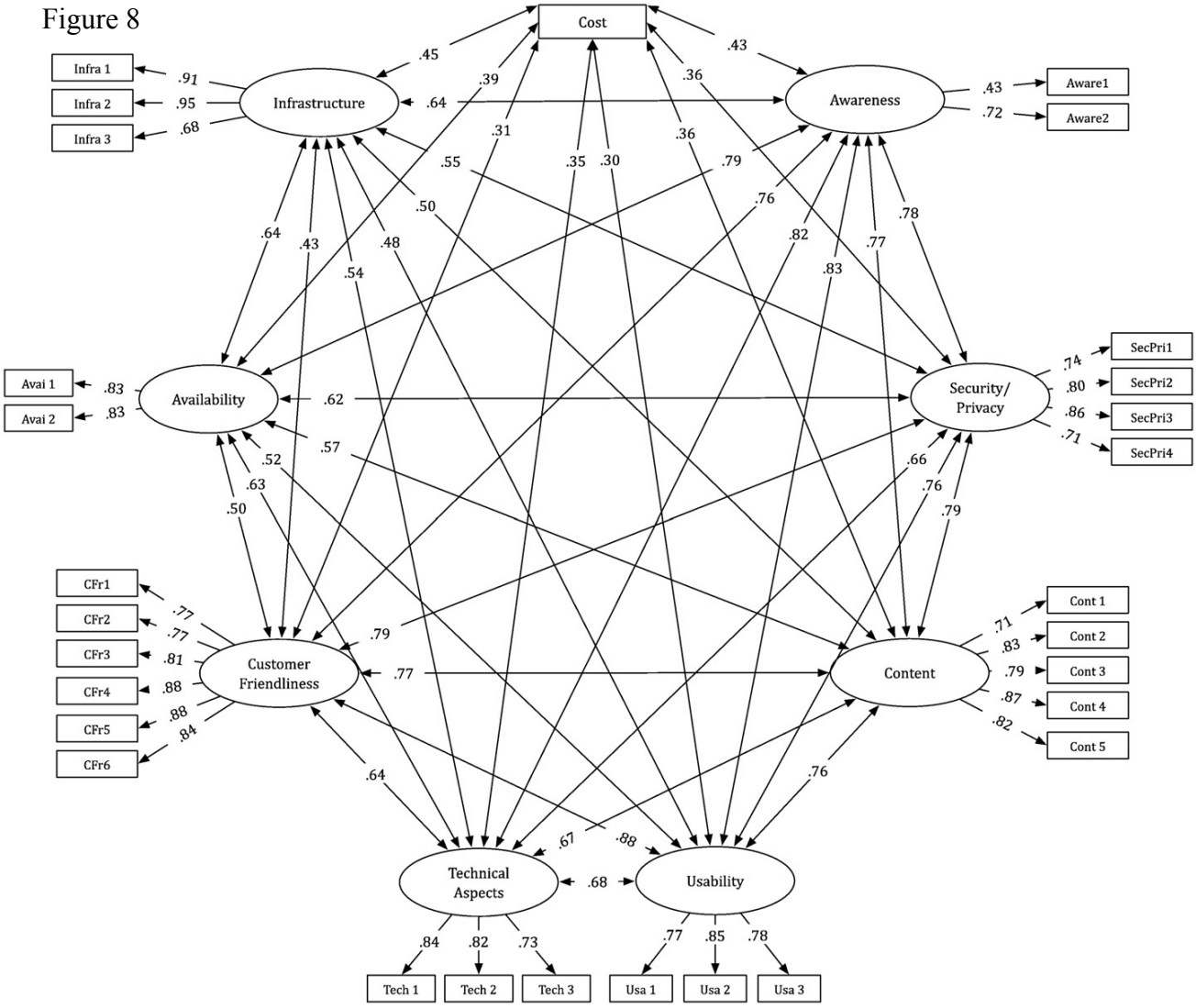
Key indicator	Indicator	Importance	Item name
Infrastructure	Skills	+++	Infra 1
	Hardware	+	Infra 2
	Software	+	Infra 3
Availability	Anytime	+	Avai 1
	Anyplace	+	Avai 2
Awareness	Communication	++	Aware 1
	Findability	+	Aware 2
Cost	Affordability	+	Cost
Technical aspects	Speed of the system	+++	Tech 1
	Technical reliability	+++	Tech 2
	Compatibility	+	Tech 3
Customer friendliness	Integration of the different services	+++	CFr 1
	Reduce of the administrative burden	+++	CFr 2
	Possibility of personal contact	+++	CFr 3
	User-oriented	++	CFr 4
	Flexibility	+	CFr 5
	Customization/personalization	+	CFr 6
Security/privacy	Acknowledge the receipt of transaction	+++	SecPri 1
	Protection of personal information	++	SecPri 2
	Security of the transaction	+	SecPri 3
	Identification	+	SecPri 4
Content	Content recency	+++	Cont 1
	Content readability	++	Cont 2
	Content credibility	++	Cont 3
	Content usefulness	+	Cont 4
	Content sufficiency	+	Cont 5
Usability	Help/guidance	+++	Usa 1
	Ease of navigation	+	Usa 2
	Lay-out and design	+	Usa 3

Figure 7

[29] Verdegem P., Verleye G. (2009) "*User-centered E-Government in practice: a comprehensive model for measuring user satisfaction",* pp. 493

[30]Coordination Unit of the Flemish E-Government -partner in the research project

Figure 8



squares. Arrows from ellipses towards squares represent the relationship between both, estimated as standardized regression coefficient. Covariation between concepts is represented by bidirectional arrows containing the Pearson product-moment correlation (Figure 8)[31].

The concepts are mutually correlated, but the link between concepts and items has on average higher values than the mutual correlations.

It is possible to conclude that "advanced statistical testing (structural equation modeling) enabled not only the validation of the theoretical model, but also the reduction of the list of 29 indicators into a measurement instrument of nine key indicators still covering the full conceptual model" (Verdegem and Verleye, 2009). Moreover, a practical tool for bringing the user-centric paradigm into practice has been provided.

4.2 The Active Citizenship Composite Indicator

[31] Verdegem P., Verleye G. (2009) "*User-centered E-Government in practice: a comprehensive model for measuring user satisfaction",* pp. 494

Another important contribution has been given by the Joint Research Center[32], which built a compositor indicator on active citizenship. The Active Citizenship Compositor Indicator (ACCI) covers 19 European countries and is based on a list of 63 basic indicators for which the data has been principally drawn from the European Social Survey of 2002. The ACCI has been tested in different ways by using Factor Analysis on the available data from European Social Survey and by performing sensitivity analysis on a plurality of scenarios.

The concepts of active citizenship is understood in the very broadest sense of the word "participation", ranges from cultural and political to environmental activities on local, regional, national, European and international levels and has been defined by the CRELL[33] as: "Participation in civil society, community and/or political life, characterized by mutual respect and non-violence and in accordance with human rights and democracy". In order to build the compositor indicator of active citizenship it was necessary to operationalize the definition of the concept. Therefore, four measurable dimensions has been identified: participation in (1) Political Life, (2) Civil Society, (3) Community Life, and (4) Values needed for active citizenship. Then each dimension was divided into sub-dimensions. Figure 9[34] shows the structure of ACCI.

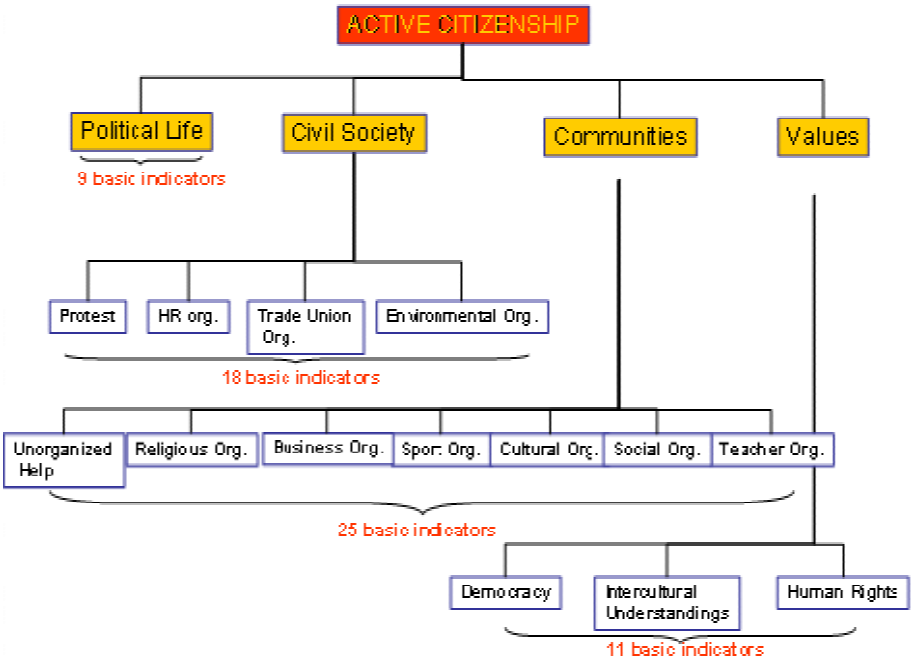


Figure 9

[32] Authors: Bryony Hoskins, Jochen Jesinghaus, Massimiliano Mascherini, Giuseppe Munda, Michela Nardo, Michaela Saisana, Daniel Van Nijlen, Daniele Vidoni, Ernesto Villalba, 2006

[33] CRELL: European Commission's Centre for Research on Lifelong Learning

[34] Hoskins B., et al. (2006) "*Measuring active citizenship in Europe",* pp. 11

The concept of active citizenship has been summarized into one number that encompasses all the 63 dimensions. To construct this compositor indicator the methodological guidelines of Nardo et al. (2005) were followed.[35] The structure of the ACCI is a weighted sum of the indices computed for the four dimensions D_i (Political Life, Civil Society, Community, Values):

$$Y_c = \sum_{i=1}^{4} w_i D_{ic}$$

where $\sum_{i=1}^{4} w_i = 1$ and $0 \leq w_i \leq 1$ for all i=1,..4, and c=1,..,19, where c indicates the number of countries.

Then, each dimension index, D_i, is computed as a linear weighted aggregation of the sub-dimension indices SD_{ij} with weights w_j^* $\quad Dic = \sum_{j=1}^{k_i} w^*_j SD$,

where $\sum_{j=1}^{k} w^*_j = 1$ and $0 \leq w_j \leq 1$ for all j=1,..k_i, and again the country index c=1,..,19.

Finally, each sub-dimension index SD_{ij} is a linear weighted sum of the s_{ij} normalized sub-indicators $I_{hi,\,jc.}$ with weights $w^{\#}_{hi,\,j}$ $\quad SD_{ijc} = \sum_{h_{ij}=1}^{s_{ij}} w^{\#}_{h_{i,j}} I_{h_{i,j}c}$.

Aggregating the different equations into one gives the general formula for the Active Citizenship Composite Indicator: $\quad Y_c = \sum_{i=1}^{4} w_i \sum_{j=1}^{k_i} w_j^* \sum_{h_{ij}=1}^{s_{ij}} w_h^{\#} I_{h_{i,j}c}$

Due to the fact that the 63 basic indicators have been constructed using different scales, a standardization process is needed before the data for the different indicators can be aggregated. Each indicator, q, was standardized based on the following rule:

$$I_{qc} = \frac{x_{qc} - \min_c(x_{qc})}{\max_c(x_{qc}) - \min_c(x_{qc})}$$

After the standardization process, the data have been transformed to ensure that for each indicator a higher score would point to a better performance. Following this approach, the basic indicators receiving the highest weights, 0.027, are those of the dimension of political life, while most of the

[35] See the joint OECD/JRC handbook on constructing composite indicators (Nardo et al., 2005) for further information

indicators for the dimension of community life only have a weight of 0.009.

The results indicate that the structure of the data corresponds to the theoretical structure. However, given the correlation structure of data, the theoretical contribution is different from the actual contribution.

5. Conclusion

The aim of this paper is to have a better understanding of the use of Information and Communication Technologies within the governmental context for implementing citizen engagement and active participation. Governments around the world are increasingly exploiting the functionality and interoperability of the Web to improve service quality and the interactions between citizens, businesses and the state (Kolsaker and Lee-Kelley, 2008). Moreover, it has been showed that there is one shared aim in all the initiatives: the implementation of the principles of transparency, participation and collaboration. Although many studies have been carried out on the performance of e-government and e-governance initiatives in order to clarify their efficiency/ functioning and their impact on citizens, it is still not clear to what extent the use of ICTs for increasing citizen engagement actually work. Therefore, it is evident that other researches are necessary. Indeed, although there is a wide variety of theoretical background on this issue, the literature lacks of strong empirical researches on this issue. The elaboration of valid indicators which measure the effects of the governments' use of ICTs on citizen engagement is, therefore, essential.

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Riassunto in italiano

La grande quantità di dati di cui è possibile usufruire oggi è spropositata ed implica inevitabilmente una serie di cambiamenti e nuove possibilità all'interno della società. In particolare, le tecnologie dell'informazione e della comunicazione (TIC) stanno progressivamente creando nuovi spazi di partecipazione politica e nuove forme di pratiche democratiche. In questo mondo "digitalizzato", dunque, i governi e le agenzie del settore pubblico si stanno gradualmente trasformando come conseguenza dello sviluppo delle tecnologie. Inoltre, attraverso l'utilizzo del digitale, viene messa a disposizione del cittadino una grande quantità di strumenti online, volti ad aumentare e ampliare la partecipazione. Una maggiore conoscenza delle nuove forme di pubblica amministrazione che supportano e ridefiniscono l'informazione, la comunicazione e le interazione tra cittadini, aziende e governo è, perciò, fondamentale.

Sono stati realizzati numerosi studi con l'intento di ampliare la conoscenza dell'approccio che i cittadini hanno nei confronti di questa "democrazia elettronica". In particolare, sono di grande interesse accademico gli sviluppi e gli effetti che i "governi elettronici" ("e-government" e "e-governance") hanno avuto sui cittadini nel corso degli anni e nelle diverse parti del mondo. Per capire gli effetti di questa nuova trasparenza amministrativa è essenziale avere un'idea chiara dei principali concetti e meccanismi coinvolti in questa trasformazione. Il concetto di "e-government" può essere definito come "l'utilizzo delle tecnologie dell'informazione (TI) e dell'Internet come supporti per implementare le operazioni amministrative, coinvolgere i cittadini e fornire i servizi amministrativi". Attraverso l' "e-governance", invece, il governo e i settori della pubblica amministrazione usano le TIC per migliorare e potenziare i processi istituzionali che guidano e contengono le attività collettive di un gruppo. Queste implementazioni avvengono attraverso iniziative di "governo aperto" (open government) che sono volte prevalentemente ad applicare tre principi: trasparenza, partecipazione e collaborazione. La trasparenza viene facilitata, per esempio, tramite portali di "open data" e politiche di inclusione digitale, che forniscono informazioni sulle operazioni e le decisioni governative in modo rapido; la partecipazione nel processo decisionale viene implementata mettendo a disposizione del cittadino consultazioni/forums online e "procedure orientate al consenso". Infine, il principio di collaborazione viene messo in pratica attraverso, per esempio, "governance multilivello" e "processi decisionali condivisi". Gli obiettivi principali di queste iniziative sono (1) una maggiore efficacia del governo, (2) una migliore qualità delle sue decisioni e (3) una maggiore responsabilità.

Il fatto che questi nuovi mezzi di comunicazione aumentino la fiducia e la percezione di "reattività" che il cittadino ha nei confronti del governo è stato appurato da numerosi studi empirici. La vera sfida è invece capire come e in quale misura l'uso delle TIC nelle operazioni di amministrazione sia realmente in grado di coinvolgere i cittadini in modo utile ed efficace e incoraggiare questi ultimi ad una partecipazione attiva. Quanto le nuove iniziative tecnologiche abbiano effettivamente un impatto sull'aumento della partecipazione rimane, infatti, una questione aperta e necessita uno studio approfondito. L'obiettivo di questa tesi è quello di fornire un quadro della relazione che intercorre tra l'uso delle tecnologie dell'informazione e della comunicazione (TIC) in ambito amministrativo e la partecipazione cittadina ("citizen engagement"). In particolare, cerca di analizzare l'impatto che l'implementazione della comunicazione digitale governativa ha effettivamente sulle interazioni tra governo e cittadino.

Il primo capitolo fornisce uno sfondo teorico dei tre principali concetti coinvolti nella trasformazione sociale dovuta all'uso della comunicazione digitale: partecipazione, e-government e e-governance. (In questo capitolo) sono riportate alcune importanti ricerche volte a studiare le attitudini dei cittadini nei confronti della democrazia digitale. Il lavoro di Kolsaker e Lee-Kelley (2008), per esempio, fornisce una ricerca quantitativa sulla visione di 3.000 cittadini inglesi nei confronti dell'e-government e dell'e-governance. I risultati dimostrano che l'e-government pur garantendo una maggiore acquisizione di conoscenza e informazioni, ha un impatto relativamente basso per quanto riguarda il "coinvolgimento democratico".

Lo studio di Tolbert e Mossberger (2006) è un altro importante contributo nell'analisi della relazione tra l'uso dell'e-government, le attitudini del cittadino verso l'e-government e la fiducia che quest'ultimo comporta nei confronti del governo. Utilizzando i dati raccolti dalla "Piew Survey Data", gli autori hanno analizzato le attitudini nei confronti dei diversi siti Web governativi. I risultati dimostrano che l'utilizzo di questi siti da parte dei cittadini è volto principalmente a cercare informazioni (63%), mentre è più basso per l'esecuzione di transazioni online (23%) e per la partecipazione politica.

Gaventa e Barrett (2012) hanno mappato gli effetti osservabili della partecipazione cittadina attraverso l'analisi di un campione di 100 studi di ricerca, creando una "tipologia". I quattro risultati visibili includono: (1) la costruzione della cittadinanza, (2) il rafforzamento delle pratiche della partecipazione, (3) il rafforzamento della "ricettività" e della responsabilità degli stati e (4) lo sviluppo di società inclusive e coesive. I risultati dimostrano che generalmente la partecipazione cittadina produce effetti positivi su questi quattro tipi di risultati e che gli indicatori variano a

seconda del tipo di partecipazione cittadina e del contesto politico. Infatti, gli autori affermano che alcuni risultati positivi possono trovare riscontro in risultati negativi paralleli; per esempio, il coinvolgimento può contribuire alla costruzione di una partecipazione attiva, come creare un senso di "assenza di potere" (disempowerment) a seconda della situazione. Gaventa e Barrett, inoltre, hanno dimostrato che i risultati positivi possono derivare indifferentemente da situazioni e stati dove il livello di democrazia è molto alto o da ambienti dove il livello di democrazia è molto basso; ciò dimostra che non c'è correlazione tra alto livello di democrazia e partecipazione.

Il concetto di partecipazione e il suo ruolo nei processi decisionali è stato ampiamente studiato e definito. Una chiara e lineare definizione viene data, ad esempio, da Tina Nabatchi (2012) che la definisce come "un processo attraverso il quale le preoccupazioni, i bisogni e i valori pubblici vengono incorporati nel processo decisionale". Si può parlare di "partecipazione indiretta" quando i cittadini scelgono i loro rappresentanti che assumono il compito di prendere decisioni per loro, mentre la "partecipazione diretta" avviene quando i cittadini sono personalmente e attivamente coinvolti nel processo decisionale. In particolare, la partecipazione diretta nel contesto dell'amministrazione pubblica è definita come "il processo attraverso il quale i membri della società (tutti coloro che non ricoprono posizioni di pubblica amministrazione) condividono il potere con gli enti pubblici nel processo decisionale di una determinata questione".

Cornwell (2008) ha cercato di categorizzare il concetto di partecipazione, studiando le diverse pratiche cosiddette "partecipative". Nella categoria di "potere cittadino" vengono inclusi in ordine di grado dal più rilevante al meno rilevante il "controllo cittadino", il "potere delegato" e la "partnership"; nella categoria di "cambiamento simbolico" ("tokenism") vengono inseriti "l'accomodamento" ("placation"), la consultazione e l'informazione. Infine, nella categoria di "nessun potere" troviamo "terapia" e "manipolazione" (Arnestein, 1969).

Un efficiente programma volto all'aumento della partecipazione può avere una serie di benefici, quali informazioni e idee provenienti direttamente dalla parte interessata, un supporto pubblico nel processo decisionale, una riduzione di conflitti prolungati e di costosi ritardi, il risparmio di denaro che può essere utilizzato per altre pratiche; e ancora un senso di cooperazione e di fiducia. Inoltre, grazie a un programma funzionale, il processo decisionale può diventare efficiente in quanto riduce la distanza tra l'amministrazione e il pubblico, fornisce opportunità di informazione diffuse e trasversali, identifica nuove dimensioni di richieste e ricerca, aiuta a identificare soluzioni alternative e produce legittimità e credibilità politica. Stansbury (2004), analizzando i vantaggi e gli svantaggi che la partecipazione cittadina implica nel processo decisionale, ha elaborato una serie di

indicatori che mostrano le condizioni favorevoli per una partecipazione favorevole. Un altro importante contributo nello studio di questo tipo di valutazione è stato dato da Andolina e altri (2003), la cui analisi fornisce un indice di partecipazione civica e politica. Gli autori hanno infatti elaborato 19 elementi che possono essere utilizzati per misurare la "partecipazione attiva".

Un modo per aumentare la fiducia e la confidenza del cittadino nei confronti del governo e della sua amministrazione è sicuramente l'implementazione della trasmissione di dati e di servizi attraverso Internet o altri strumenti digitali. In questo senso, dunque, l'e-government è un mezzo necessario per migliorare le relazioni tra aziende, cittadino e governo, aumentare il potere del cittadino e rafforzare il gestione del governo. I benefici che ne derivano sono vari: dalla diminuzione della corruzione, all'aumento della trasparenza, da una crescita delle entrate a una riduzione dei costi. Chun (2010) ha studiato l'evoluzione dell'e-government nei diversi fasi: nella prima troviamo la "presenza digitale" che si manifesta attraverso siti Web che forniscono informazioni; la secondoa prevede il Web, come mezzo di interazione tra governo e cittadini tramite contatti email e forum interattivi; la terza fase fornisce servizi di transazione digitale, come il rinnovo delle patenti e il pagamento delle tasse. Nella quarta il governo promuove meccanismi collaborativi nei processi decisionali.

Il concetto di e-governance, così come quello di e-government, è stato ampiamente studiato e definito. Mache e McNiven (2003) lo definiscono come la relazione mediata dalla tecnologia che intercorre tra i cittadini e i loro governi e che si manifesta attraverso la il potenziamento delle "deliberazioni elettroniche" in diversi ambiti, quali la comunicazione civica, l'evoluzione delle politiche e le espressioni democratiche del volere dei cittadini. L'implementazione dell'e-governance può avere una serie di implicazioni, quali nuovi schemi di formulazione delle politiche, nuove forme di cittadinanza, nuovi modelli nella relazione tra cittadini e governo, nuove possibilità di sviluppo economico. Inoltre può implicare nuovi tipi di leadership, nuovi modi di discutere e decidere le politiche e nuovi e innovativi mezzi per accedere all'educazione. É dunque chiaro che l'obiettivo dell'e-governance è quello di introdurre e ampliare le informazioni tecnologiche e le loro automazioni nei settori amministrativi e, di conseguenza, aumentare la trasparenza e la responsabilità del governo.

Nel secondo capitolo vengono riportati alcuni progetti volti all'aumento della partecipazione cittadina (citizen engagement) attraverso l'uso delle TIC. In particolare, sono analizzati i casi dell'India e del Sud Africa. L'obiettivo è quello di identificare le pratiche migliori e gli ostacoli nell'applicazione dell'e-governance.

In India progetti come MCA21, promosso dal Ministero per le imprese hanno permesso il 100% di depositi elettronici, più del 40% di pagamenti elettronici, una grande quantità di certificati digitali per la maggior parte delle transazioni. É importante specificare che la maggior parte delle iniziative di e-government in India non sono una mera applicazione della tecnologia, ma implicano un processo di riprogettazione e una radicale trasformazione organizzativa. FRIENDS è un progetto orientato alle persone e lanciato nel 2000 dallo Dipartimento delle tecnologie informatiche dello stato di Kerala in India. L'iniziativa offre pagamenti anticongiunturali "one-stop" permessi dalla tecnologia (IT-enabled), grazie alla quale i cittadini possono pagare i loro conti. L'AKSHAYA è un altro progetto lanciato nell'ottobre del 2002 dal "IT Mission" del governo di Kerala; l'obiettivo del progetto è quello di limitare il gap digitale in Kerala e di agire come un "catalizzatore" nello sviluppo socio-economico. Madon e Kiran (2002), testando l'effetto del progetto FRIENDS hanno affermato che "le attitudini dei cittadini verso il governo si stanno spostando verso un senso di maggiore fiducia"; infatti, "il governo è in grado di fornire un ragionevole livello di servizi senza corruzione". Uno dei risultati del progetto AKSHAYA, inoltre, è quello di rendere i cittadini più fiduciosi, competenti e legittimati.

La digitalizzazione del Sud Africa si può far risalire al 2001 quando il Dipartimento dei Servizi e dell'Amministrazione pubblica ha sviluppato una politica di e-governance. Nel 2014 la "ICT Research and Development" (2014) ha poi proposto una strategia per creare un sistema attraverso il quale avanzare e rinnovare l'uso delle TIC in Sud Africa. I suoi obiettivi sono: sviluppare forti attività di ricerca nell'ambito delle TIC, costruire un ambiente solido necessario per l'innovazione e fornire una base di competenza delle TIC per la ricerca, l'industria e lo sviluppo economico. Nel modello di misurazione della presenza del Web in Sud Africa del 2014 il Programma di Sviluppo delle Nazioni Unite ha fornito una visione dell'implementazione del servizio pubblico basato sul Web suddividendolo in cinque fasi: (1) la nascita del web che prevede la fruizione di informazioni nelle diverse attività governative, (2) l'incremento del web, (3) i siti Web, (4) le transazioni e (5) la presenza del Web ininterrotta. É importante sottolineare che il tasso di implementazione delle TIC in Sud Africa è del 0.39%, comparato al tasso medio mondiale che è del 0.45%. Il governo sudafricano, inoltre, ha formulato una politica per la comunicazione tra governo e cittadino attraverso le TIC come primo obiettivo; ha infatti creato un portale governativo, www.gov.za, come strumento per assicurare la partecipazione, l'interazione e una buona governance.

Nei paragrafi 3.3 e 3.4 vengono riportati due progetti che hanno l'obiettivo di promuovere la trasparenza e la responsabilità civile attraverso l'utilizzo delle TIC nel settore pubblico. Il primo è il

“Check My School” (CMS) nelle Filippine, un progetto che fornisce un’innovativa piattaforma che usa gli “open data” per promuovere la partecipazione cittadina nel monitoraggio della performance della scuola pubblica. Il secondo è il “Three out of Three”, un’iniziativa messicana che cerca di ricostruire la fiducia dei cittadini nel governo e di aumentare la trasparenza tra i politici, ai quali viene chiesta la piena divulgazione delle informazioni sia finanziarie che di conflitti d’interesse.

Il terzo capitolo, infine, analizza alcuni indicatori considerati utili per misurare a che livello una società è posizionata nell’utilizzo delle opportunità fornite dalle TIC e il suo livello di attività della cittadinanza. L’indicatore può essere definito come uno “strumento per misurare quello che succede realmente rispetto a quello che era stato progettato in termini di quantità, qualità e tempestività”. È dunque necessario sia per capire la qualità di un programma volto alla partecipazione cittadina sia per aiutare i governi a migliorare e rendere i programmi più utili, economici e vantaggiosi.

In questo capitolo sono riportati due modelli di misurazione: uno che investiga la soddisfazione degli utenti dei servizi pubblici online, l’altro volto a misurare i livelli di partecipazione attiva.

Verdegem e Verley (2009) hanno sviluppato un modello globale per misurare la soddisfazione dell’utente nel contesto dell’e-government attraverso una ricerca a due fasi. Nella prima, quantitativa, dimostrano che i seguenti fattori sono importanti per i cittadini e che dunque devono essere tenuti in considerazione nella misurazione della soddisfazione: riduzione degli oneri amministrativi, affidabilità, fruibilità, convenienza economica, facilità d’uso, sicurezza, leggibilità del contenuto, protezione della privacy, qualità del contenuto, trasparenza, accessibilità e reattività. Nella seconda, qualitativa, i risultati mostrano che la maggior parte dei cittadini considera le informazioni fornite dal governo incomplete, poco chiare e inaffidabili.

L’“indicatore composito di cittadinanza attiva” è stato creato dal Joint Research Center, copre 10 paesi europei e si basa su una lista di 63 indicatori di base. Sono state poi identificate quattro dimensioni misurabili, che includono la partecipazione (1) nella vita politica, (2) nella società civile, (3) nella vita comunitaria e (4) i Valori necessari alla partecipazione attiva. Infine, il concetto di cittadinanza attiva è stato riassunto in un unico numero che comprende tutte le 63 dimensioni.

Lo scopo di questa tesi è quello di approfondire la conoscenza sull’uso delle tecnologie dell’informazione e della comunicazione (TIC) all’interno del contesto governativo e amministrativo e le sue capacità nell’implementate il coinvolgimento cittadino e la partecipazione attiva. È evidente che i governi nel mondo stanno sfruttando sempre di più la funzionalità e l’interoperabilità del Web per migliorare la qualità dei servizi e delle relazioni con i cittadini. Quello

che è meno chiaro è fino a che punto le TIC hanno un reale impatto sulla partecipazione attiva. Nonostante questa tesi fornisca un quadro generale dei maggiori studi compiuti in questo ambito, manca di una ricerca empirica che possa mostrare risultati chiari sull'argomento. Saranno dunque necessarie altre ricerche meno teoriche e che puntino all'individuazione di uno o più indicatori in grado di misurare l'aumento della partecipazione sulla base di un aumento dell'utilizzo delle TIC.