

Perceptions of Senegalese Telecommunications Policy Experts on Factors  
Affecting Policy Reform

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## **Abstract**

This paper seeks to inform decision-makers on factors perceived by Senegalese telecommunications experts as hindering the policy reform. Semi-structured interviews were conducted with eight Senegalese telecommunications experts. They perceive that factors affecting the policy reform in the sector are issues associated with three of the six Worldwide Governance Indicators (WGI) produced by Kaufmann, Kraay, & Mastruzzi (2012). These three categories represent voice and accountability, government effectiveness, and regulatory quality. Successful policy reform in the Senegalese telecommunications sector will depend on the ability of Senegalese institutions in charge of telecommunications to address issues described within these three categories.

*Keywords:* Policy, Reform, Regulation, Senegal, Strategy, Universal access

## **Introduction**

Since 1960, Senegal has been an independent democracy, which grew to become a model country in sub-Saharan Africa. The recent trip in 2013 of the President of the United States of America to Senegal, Tanzania, and South Africa was a way to recognize the three countries, among other reasons, as African models for strong democratic institutions. Paradoxically, plenty of work remains to be done in order to strengthen African institutions so that they can efficiently contribute to their socio-economic development. This is particularly true regarding telecommunications institutions in Senegal. In this paper, telecommunications refer to technological means, such as equipment and services used to communicate at a distance.

There is consensus that in order to enhance the development of the African telecommunications sector, independent and strong regulators should be set up to foster competition among telecommunications service providers; thus, progress toward effective policy reform can only be accomplished once independent and strong regulators are in place (McCormick, 2002). Many authors argue that the weakness of legal institutions is the most important factor hindering efforts toward telecommunications policy reform (Chinn and Fairlie, 2006). For example, it is often the case that industry experts are not consulted or placed in decision-making positions allowing them to effectively impact policy reform. A successful example of such a process took place in Nigeria where the Nigerian Communication Commission (NCC), the independent national regulatory authority for the telecommunications industry, took aggressive steps to open the telecommunications sector to private investment and enterprise. To boost the economy of Nigeria, the NCC supported joint ventures between foreign companies and

Nigerian companies (Noam, 1999). The NCC successfully achieved effective policy reform concerning the development of the Nigerian private telecommunications sector. Because the NCC is an independent and strong institution, it was able to dictate the terms of the liberalization of Nigeria's telecommunications sector offering the opportunity to its private sector to fully take advantage of liberalization.

Another critical factor that authors identify as affecting policy reform is the impact of non-governmental entities in influencing the strategies and policies of development of the telecommunications sector. One positive example would be the case of South Africa, where in the 1990s, the government, in collaboration with industry leaders, opted for the "partial" privatization of the historically government run telecommunications service. Horwitz (2001) recalls that different parties managed to craft a pragmatic balance between business desires, universal service needs of all South Africans, the need to preserve a national asset, as well as the need to open the sector to new entrepreneurs and investments.

In the 1990's, the World Bank, USAID, and other international organizations strongly advised developing countries such as Senegal to reform their telecommunications sector through liberalization, supporting the idea that competition would stimulate economic development (Cheneau-Loquay, 2000). Senegal did not initially implement the World Bank recommendation, which was to open up competition in the telecommunications sector. Senegal's choice to "partially" privatize SONATEL prior to opening up competition in the sector has proven to be successful.

Senegal has developed one of Africa's most extensive and modern telecommunications infrastructure (Internet World Stats, 2012). According to one

industry expert, Senegal's currently developed infrastructure resulted from the Senegalese government postponing the liberalization of the telecommunications sector by prioritizing the development of SONATEL, the historical operator, which invested in digitized infrastructure and worked to optimize universal access. According to the same industry expert, the deferred liberalization, despite pressing demands from the World Trade Organization and World Bank, contributed to placing Senegal among top countries in sub-Saharan Africa in terms of telecommunications infrastructure, universal access, and affordability of telecommunications services. According to BuddeComm, a global independent telecommunications research and consultancy company, SONATEL has one of the most efficient telecom networks in West Africa, offering some of the lowest retail and wholesale prices in the region, although they are still high by global standards (BuddeComm, 2013).

Many scholars' and industry experts' perceptions on factors affecting policy reform in Senegal, and in Africa as a whole, converge toward issues related to the regulatory environment such as key reform objectives, the role of the government, and the ability of regulatory authorities toward implementing and achieving these objectives. In the case of Senegal, policy experts highlight that the main factors affecting policy reform are the lack of a clear strategy for development of the telecommunications sector and the weakness of the Authority for the Regulation of Telecommunications and Posts (ARTP). The ARTP's weakness resides in its instability due to the lack of autonomy from the President of Senegal, who nominates the ARTP's executive director.

Despite the success and status achieved by Senegal's telecommunications industry, governance issues such as the weakness of legal institutions and the lack of

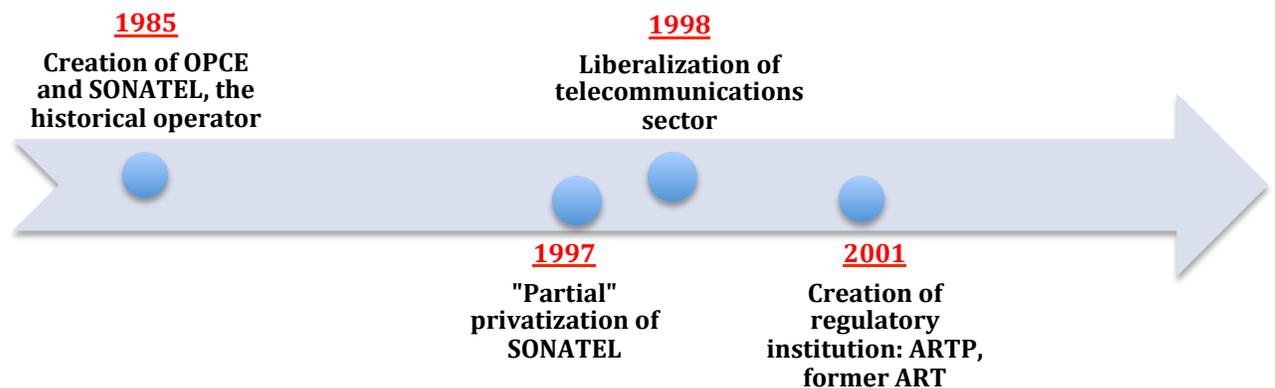
strategy need to be resolved in order to achieve comparative levels of telecommunications development as seen in South Africa, a successful model for telecommunications in Africa.

## Literature Review

### Historical Reform of the Telecommunications Sector

The history of telecommunications reform in Senegal is marked by four major phases: the creation of SONATEL, the “partial” privatization of SONATEL, the liberalization of the sector, and the creation of the Authority for the Regulation of Telecommunications and Posts (ARTP) (formerly known as the Agency for the Regulation of Telecommunications (ART)).

**Figure 1 – Chronological Timeframe of Major Telecommunications Reform in Senegal**



*Sources: (ARTP, 2003) and (Kane, 2010)*

**The reform of 1985.** The first phase of telecommunications reform in Senegal began in 1960, the time of Senegal’s political independence, and continued until 1985. After the 1960 independence, telecommunications were run as a public service by the independent Senegalese government. The country faced issues with universal access

because the telecommunications infrastructure was built and operated by colonists to exclusively service communications between strategic cities and the French colonial empire. An example of a strategic city was Dakar, which is located on the West coast of Senegal and is the capital city of Senegal since the country's independence. In 1943, landline networks were built in Dakar as the city offered strategic commercial and military advantages due to its port.

As with other former French colonies in Africa, Senegal inherited old analog telecommunications infrastructure from the French colonial empire. By 1960, Senegal's landline networks were obsolete because few investments were made by the colonists to improve existing infrastructure. Moreover, telecommunications equipment originating from France made the country dependent on new technologies and to the French telecommunications industry (Kane, 2010).

Disposing of such old infrastructure hindered the Senegalese government's independence from France, as well as its capacity to offer better quality services and universal access. Aware of scientific and technical progress in telecommunications, and being greatly in need of new infrastructure to offer better quality of service, the Senegalese government initiated a plan for the reformation of the telecommunications sector. Thus, in June 1983, the Senegalese "Days of Telecommunications" were organized to reflect and decide on the best-suited reform for the Senegalese telecommunications sector. The significant results from this taskforce were the creation of the Office of Post and Savings (OPCE), the fusion of the Senegal International Telecommunications Company (TELESENEGAL) and the Direction of Internal Telecommunications of the Office of Posts and Telecommunications (OPT), which gave

birth to the National Telecommunications Company (SONATEL). At the time, the government ceded, through a convention, its control and exclusive telecommunications rights over to SONATEL (ART Annual Activities Report, 2003).

**“Partial” privatization of the historical operator and liberalization of the sector.** The second phase of reform in the Senegalese telecommunications sector is marked by the “partial” privatization of SONATEL in 1997. The catalyst that led to the “partial” privatization of SONATEL was the Group of Reflection on Competition and Growth (GRCC). The GRCC was created in 1995 and its participants included administration representatives, employers’ organizations, labor unions, rural actors, and consumer associations. The GRCC’s mission was to create a framework for dialogue, analysis, information and reflection to identify challenges to competition and economic growth, as well as to formulate proposals to reinforce the private sector’s contribution to economic development (Sagna, 2010). The GRCC made the reform of telecommunications a priority on its agenda. Employers’ organizations were opposed to SONATEL’s labor unions regarding the model to apply for telecommunications reform. Employers’ organizations advocated liberalization in order to enhance competition in the telecommunications sector. Whereas, SONATEL’s labor unions advocated for the privatization of SONATEL arguing that it would allow SONATEL to prepare better to face competition. The winners of the debate were SONATEL’s labor unions, which influenced the sequence of reform with the “partial” privatization of SONATEL preceding the liberalization of the telecommunications sector. As a result of choosing privatization, in 1996, the Senegalese government launched a Request for Proposal (RFP) offering one-third of SONATEL’s shares to a strategic partner: France Télécom.

The third phase of telecommunications reform was the liberalization of the sector, an option that was strongly advocated by employers' organizations as they argued that liberalization would create competition, enhance affordability and support universal access. The liberalization of the sector was much needed, but the fact that it occurred after the "partial" privatization of SONATEL hindered competition. After the privatization of SONATEL in 1997, the company operated more than two years without direct competition, which allowed it to develop a significant comparative advantage (Sagna, 2010). TIGO (SENTEL GSM) (hereinafter referred to as "TIGO"), one brand of the group Millicom International Cellular (MIC) and the first competitor of SONATEL in the Senegalese telecommunications industry, was granted a license to provide services for the mobile market in 1998. TIGO started its operations in April 1999 and ten years later, the telecommunications service provider had gained more than 30% of the market shares. Nevertheless, TIGO did not alter the sector's domination by SONATEL because the historical operator was good. Indeed, SONATEL took advantage of the "partial" privatization to invest in new telecommunications technologies and equipment throughout the country, allowing it to build quality infrastructure and capture a strong market share to the detriment of prospective competitors entering the Senegalese telecommunications market. As of 2013, SONATEL is the biggest capitalized company in the Bourse Régionale des Valeurs Mobilières (BRVM), which is the regional stock exchange for member countries of the West African Economic and Monetary Union (WAEMU) (BRVM, 2013). One industry expert who was interviewed gives significant credit to SONATEL's CEO and executive management team for growing the company and strengthening the historical operator. The interviewee explained that Senegal is ahead

of many sub-Saharan African countries such as Mali, Côte d'Ivoire, Cameroon, among others, in terms of telecommunications infrastructure, services quality and affordability. Senegal's leadership in sub-Saharan Africa telecommunications panorama is largely due to the choice made by decision-makers to privatize SONATEL, and SONATEL's executive management's ambition to grow the company while developing the telecommunications sector through investments in new telecommunications infrastructure across the country.

Although SONATEL significantly contributed to the development of Senegal's telecommunications sector, the decision to liberalize the sector after the "partial" privatization of SONATEL created a hostile environment for competitors. Three fundamental aspects of the GRCC mission were to improve competition, growth, and to formulate propositions to reinforce the private sector's contribution to economic development. Beside growth in the sector, the other two aspects were not successfully achieved as SONATEL had no strong competition and the private sector strives to enter the telecommunications market. Furthermore, foreign direct investments did not increase and the sector remained nominally under the control of the government (Sagna, 2010).

**Establishment of the regulatory authority for telecommunications.** The fourth and last phase of Senegal's telecommunications reform was the creation in 2001 of the regulatory institution: the Authority for the Regulation of Telecommunications and Posts (ARTP). Before the creation of ARTP, SONATEL was in charge of regulating the telecommunications sector. Setting up ARTP was imperative because there needed to be a regulatory authority to foster competition within the telecommunications sector. The main role of ARTP is to provide a regulatory framework that is efficient and transparent,

which fosters true competition in order to fulfill the satisfaction of networks and telecommunications services customers (ARTP, 2004). This task has proven to be very complex and challenging for the simple reason that ARTP's independence from the government and SONATEL is very limited as ARTP depends on the Senegalese government, which owns 28% of the shares. Moreover, the Prime Minister is the administrative authority responsible for telecommunications. The proximity between the government and ARTP raises questions on the neutrality of the government in the regulatory mission of ARTP. SONATEL archives show that litigation against its clients is very often ruled in SONATEL's favor (Kane, 2010). Thus, the independence of ARTP is fundamental to avoiding conflicts of interest and allowing the regulator to create a credible competitive environment that is secure for investors.

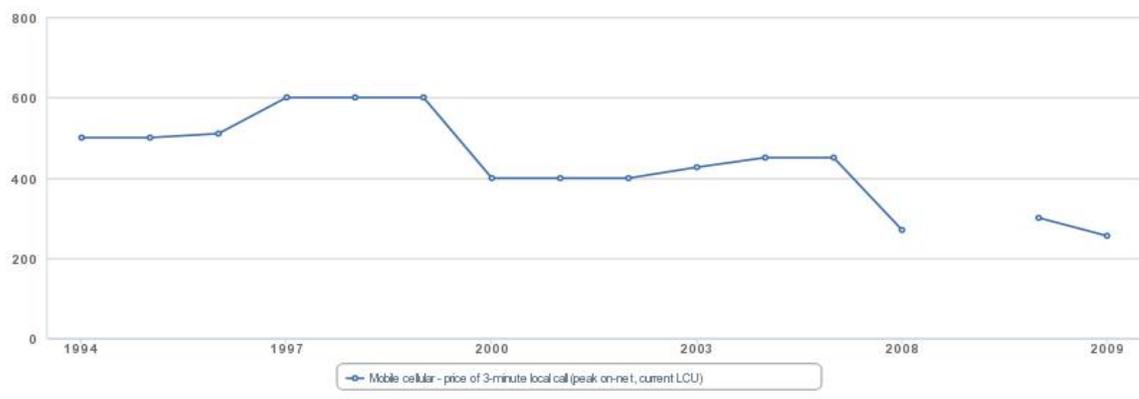
### **TIGO and the License Issue with the Senegalese Government**

Today, we can affirm with confidence that the Senegalese telecommunications sector is one of the most dynamic and productive sectors in Senegal. In 2012, the sector contributed to 6.7% of Senegal's GDP (DPEE, 2013). However, it is the sector that experienced the most controversial issues; the noisiest scandals were related to contentious practices by ARTP and the Senegalese government. This section presents the Senegalese government's licensing litigation against TIGO. The study of TIGO's contribution to the mobile market, the presentation of the licensing issue, and the analysis of the settlement are also provided.

**TIGO's impact on the mobile market.** TIGO is a subsidiary of Millicom International Cellular. TIGO was the first company to benefit from the liberalization of the telecommunications sector in Senegal. In fact, it was the first competitor of

SONATEL in the mobile market. TIGO's contribution to improving customer satisfaction was tremendous because the company deployed its own telecommunication infrastructure and fostered competition through innovation and commercial promotions. Below are two graphs, each showing a specific characteristic of improvement in customer satisfaction:

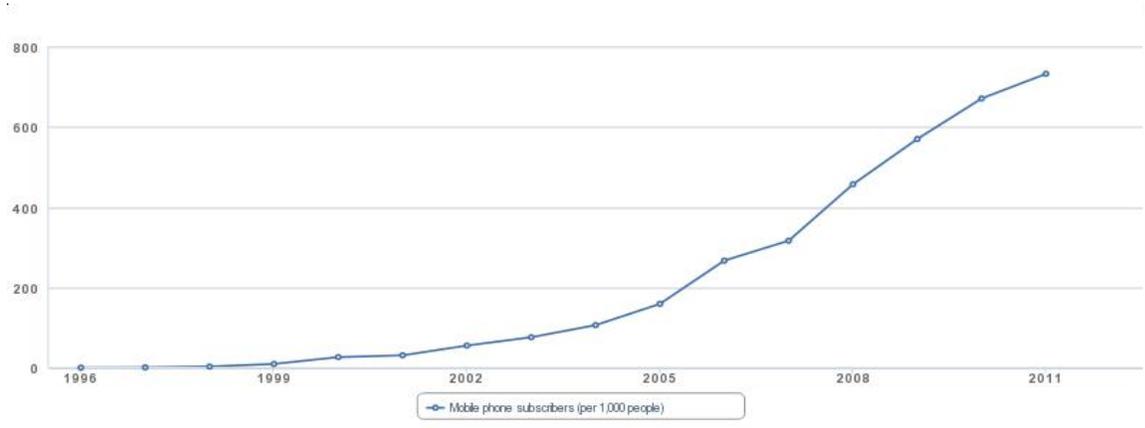
**Figure 2 – Mobile cellular - price of 3-minute local call (peak on-net, current LCU)**



*Data Source: (World Bank, 2013)*

In Figure 2, the graph shows the pattern of mobile cellular prices from 1994 to 2009. There was only one licensed mobile operator between 1994 and 1998: SONATEL. During that period of time, the graph shows that mobile cellular prices had an overall rising pattern. However, from 1999 to 2009, the graph displays an overall pattern of decreasing prices, which corresponds to the participation of TIGO in the mobile market. Moreover, the increased affordability of cellphones in the African market and the increased number of mobile phone subscribers, displayed in Figure 3, explains the drop in mobile cellular prices during that period. Thus, among other factors, the entry of TIGO in the mobile market contributed in improving one characteristic of customer satisfaction: lower overall mobile cellular prices.

**Figure 3 – Mobile phone subscribers (per 1,000 people)**



*Data Source: (World Bank, 2013)*

In Figure 3, the graph illustrates an exponential growth in the mobile phone subscribers per 1,000 people from 1996 to 2011. From 1999, the year that TIGO started operating in the mobile market, to 2011, a sharp increase in the number of mobile phone subscribers occurred. This graph illustrates that among other factors, the availability of mobile phones, the affordability of mobile phones, and TIGO's entry to the mobile market significantly contributed to boost subscription rates.

**The Senegalese government litigation against TIGO.** In 1998, TIGO was granted a 20-year license to operate in the mobile market for 50 million FCFA, the Senegalese currency that is equivalent to \$99,723.74 USD. According to interviewees, TIGO's license was granted without a Request for Proposal (RFP). A weak regulatory framework due to the absence of legitimate regulatory authority explains this less than transparent practice.

The 2000 Presidential elections in Senegal brought about a change in the political climate. A liberal government came into power and accused TIGO of failure to comply with their licensing engagements related to investments in the telecommunications sector, and failure to make installment payments amounting to 579 million FCFA, or

\$1,154,071.70 USD. In October 2, 2000, the Senegalese Council of Ministers communicated that they would revoke TIGO license by September 29, 2000. To defend itself from the government's accusations, TIGO published a public memorandum while continuing to operate in the sector. In August 2002, TIGO and Millicom's executives arranged a meeting with the Senegalese President to find a friendly compromise and avoid tedious litigation. The outcome of this meeting was that the government dropped its intention to revoke TIGO's license. The two parties found a compromise and TIGO agreed to negotiate new conditions of operations in Senegal.

Six years later, in 2008, the transitional government that was beginning its second term informed Millicom that it would proceed with the revocation of TIGO's license starting October 31, 2008. TIGO and the government embarked in a lawsuit in front of the Regional Court of Dakar and the International Centre for Settlement of Investment Disputes (ICSID). The ICSID recommended in December 2009 that the Senegalese Government stop the lawsuit against TIGO. After the presidential elections of March 2012, a new president was elected. The main goals of the new president echoed around the fight against corruption, enhancing the government's effectiveness and accountability, as well as improving the quality of legal institutions. Thus, the new government, through the intermediary of the Minister of Economics and Finance as well as the Executive Director of ARTP, formally ended the long lasting litigation against TIGO.

**Analysis of the settlement.** The conflict between the Senegalese government and TIGO lasted more than 10 years and it created a climate of tension in the Senegalese telecommunications sector. The uncertainty and instability of TIGO's future in Senegal's

telecommunications sector hindered the company's realization of additional infrastructure. In 2012, the Senegalese government granted TIGO a global license for 53 billion FCFA, or \$ 105,934,420.45 USD, allowing it to operate in all the market segments of telecommunications until 2028. According to Cheikh Tidiane Ndiougue (2012), former Director of Studies and Regulation of Posts and Telecommunications, if it is the case that TIGO was granted a global license it is a "huge mistake" because of the following reasons.

One reason is that the government should have charged at least 100 billion FCFA, or \$199,858,666.95 USD for TIGO's new global telecommunications license (Ndiougue, 2012). In 2007, a global license was granted to a third operator, SUDATEL, for 100 billion FCFA. In 2012, TIGO, who has been operating with a mobile license for 14 years that was scheduled to expire in 2018, was granted a global license for almost half the price was that paid by SUDATEL in 2007. Given this situation, it is evident that SUDATEL is being penalized and that regulation has failed in ensuring fair competition to SUDATEL's detriment.

Another problem related to the granting of TIGO's global license is that it hinders the opportunities for the policy reform that could have happened. Indeed, SONATEL's license will expire in 2017 and TIGO's license is scheduled to expire in 2018. If the negotiations for TIGO's license were postponed until the expiration of SONATEL's license in 2017, the government could have prepared a licensing agreement aimed at enhancing fair competition between operators and supporting universal access.

Some questions worth raising are whether the government understands the need to reform the telecommunications sector, whether the government has decision-makers who

can prepare a strategy of development for the telecommunications sector and advocate effective policy reform. It is time for all Senegalese telecommunications stakeholders to discuss, collaborate and prepare for a successful reform process.

### **Theoretical Framework**

The Worldwide Governance Indicators (WGI) produced by Kaufmann, Kraay, & Mastruzzi (2012) will be used as the research theoretical framework. The Worldwide Governance Indicators (WGI) are a research dataset summarizing the views on the quality of governance provided by a large number of enterprise, citizen and expert survey respondents in industrial and developing countries (The World Bank Group, 2012). The WGI reports aggregate and individual governance indicators for six dimensions of governance, which are:

- Voice and Accountability
- Political Stability and Absence of Violence
- Government Effectiveness
- Regulatory Quality
- Rule of Law
- Control of Corruption

For the purpose of this research, four of the six WGI will be used as a framework to study factors affecting the policy reform in the Senegalese telecommunications sector. These four WGI were selected as the backbone of the theoretical framework because they best represent high-level categories as factors identified in the literature and interviews as hindering policy reform.

## Research Methodology

As a means of verifying the extent to which generalizations about factors affecting telecommunications policy in developing societies were apparent in Senegal, eight Senegalese telecommunications experts with robust experience in the sector were interviewed. Some interviewees were top executives at telecommunications service operators, decision-makers in governmental and non-governmental organizations, executives in Senegalese national private telecommunications companies, union leaders and consultants with extensive experience in the telecommunications sector. Interviewees were selected based on the concept of “Three Dimensions of Experts’ Knowledge” (Audenhove, 2012) presented as follows:

Technical Knowledge: Experts who possess a specific knowledge on the topic.

Process Knowledge: Experts who acquired knowledge based on direct involvement.

Explanatory Knowledge: Experts whose knowledge is based on beliefs and subjective interpretation of rules.

### Primary Research Question

What do current telecommunications regulators and experts in Senegal believe to be the factors impeding their ability to successfully achieve the goals driving the telecommunications policy reform process?

**Brief description of interview questions asked.** Interview questions were written in order to best answer and supplement the overall research question presented in the section above. Given the various knowledge of experts interviewed, questions were written in order to highlight the seven areas below:

- Description of profile and experience of interviewee
- Analysis of Senegalese telecommunications sector sequence of reform
- Analysis and evaluation of the government and the telecommunications regulatory authority in driving the policy reform process
- Overview of Senegal’s telecommunications industry structure
- International influence on the Senegalese telecommunications sector
- Insight on ongoing telecommunications projects, regulations
- Experts’ personal opinion on Senegal’s capacity to drive effective policy reform for the development of the telecommunications sector

**Description of Interview Process**

Two rounds of semi-structured interviews were held. The first round of interviews was organized in the form of face-to-face meetings with five Senegalese telecommunications experts and took place in Senegal in January 2013. The second round of interviews took place in June 2013 with three additional experts through a videoconference on Skype. Throughout the paper, experts’ names and titles are kept confidential due to the political considerations. Nevertheless, an indication of each expert’s dimension of knowledge is provided in the sub-sections.

**Identification of interviewees’ expert knowledge dimension.** Eight experts were interviewed between January and June 2013. An indication of these interviewees’ expert knowledge dimensions is provided in the table below.

**Table 1 –Experts Knowledge Dimension Categorization**

<b>Interviewee #</b>	<b>Technical Knowledge</b>	<b>Process Knowledge</b>	<b>Explanatory Knowledge</b>
<b>1</b>	x	x	
<b>2</b>		x	x
<b>3</b>	x	x	
<b>4</b>			x
<b>5</b>		x	
<b>6</b>	x	x	x
<b>7</b>	x	x	x
<b>8</b>	x	x	

*Source: (Audenhove, 2012) and Interviews*

In most cases, interviewees’ knowledge fit across more than one dimension because the majority have been involved in the telecommunications sector for more than twenty years. This allowed them to gain robust experience in different positions and contribute as key decision-makers for the development of the sector.

### **Findings**

Based on findings from the interviews, the following factors were specifically identified as hindering effective policy reform within the Senegalese telecommunications sector:

- Institutional instability
- Lack of defined strategy by the government
- Lack of expertise in the government
- Lack of independent and strong regulatory authority
- Conflict of interest between the government, SONATEL and regulators
- Misunderstanding and/or miscommunication between the government (decision makers) and “independent” telecommunications experts
- Absence of regulatory authority before liberalization

## Senegalese Telecommunications Experts' Perceptions on Factors Affecting Policy Reform

Table 2, organizes each factor perceived by Senegalese telecommunications experts as hindering the policy reform into one of the four categories of the Worldwide Governance Indicators (WGI). This table provides a visual support of the theoretical framework that is used to conduct the analysis of factors affecting the policy reform.

**Table 2 – Categorization of Factors Affecting the Policy Reform in Senegal**

<b>WGI</b>	<b>Interviewees' Perceptions of Factors Hindering Policy Reform</b>		
<b>Voice and Accountability</b>	Misunderstanding and/or miscommunication between the government (decision makers) and "independent" telecommunications experts		
<b>Government Effectiveness</b>	Institutional instability	Lack of defined strategy by the government	Lack of expertise in the government
<b>Regulatory Quality</b>	Lack of independent and strong regulatory authority	Absence of regulatory authority before liberalization	Conflict of interest between the government, SONATEL and regulators

*Sources: (The World Bank Group, 2012), Literature and Interviews*

### Analysis of findings

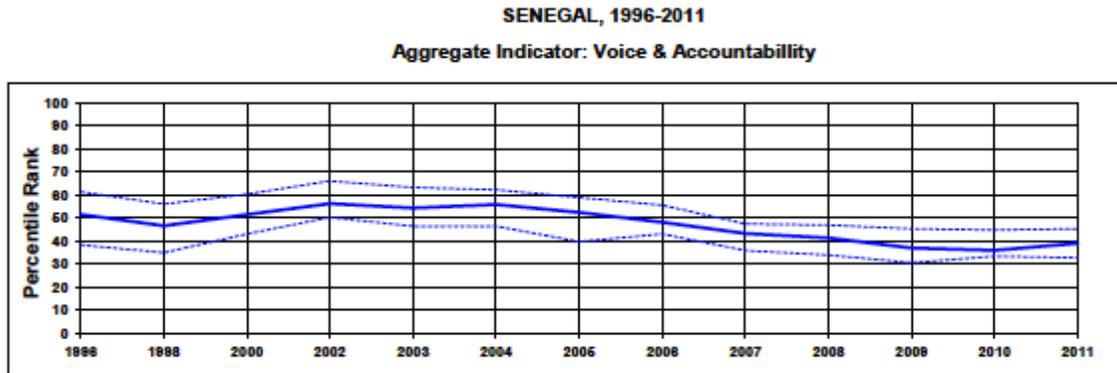
This section provides an analysis of factors affecting the policy reform in the Senegalese telecommunications sector. South Africa's performance in the WGI will be compared to Senegal's in order to provide a better insight on Senegal's current ranking and room for progress. South Africa is the African reference in terms of governance as well as policy reform for telecommunications, and other sectors. This is the reason why Senegal's WGI performance is compared to South Africa's. The graphs displayed in this

section were retrieved from Senegal’s and South Africa’s country data report (see references to view the full report). The vertical axis indicates the percentile rank of a country among all other countries in the world; 100 correspond to the highest rank and 0 corresponds to the lowest rank.

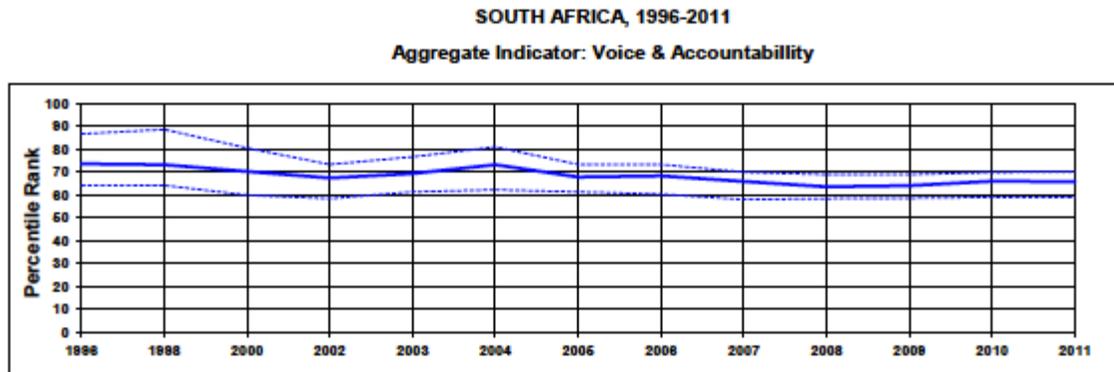
**Voice and accountability.** According to The World Bank Group (2012), voice and accountability capture perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.

Compared to South Africa, Senegal’s governance environment is perceived to display lower levels of voice and accountability. Since 1996, the perception of voice and accountability in Senegal has been declining. In 2011, Figure 4 shows that Senegal was ranked at the 40<sup>th</sup> percentile, while Figure 5 shows that South Africa was ranked between the 65<sup>th</sup> and 70<sup>th</sup> percentile.

**Figure 4**



**Figure 5**

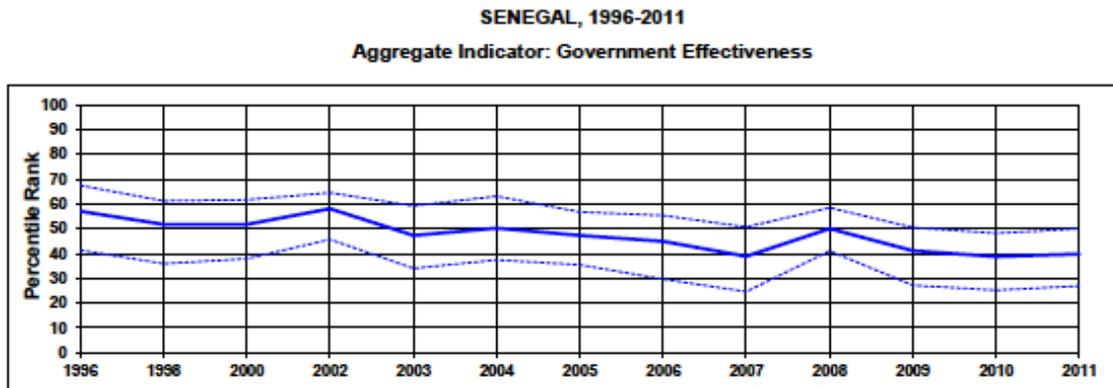


Voice and accountability in the case of the Senegalese telecommunications sector requires improvement in terms of enhanced communication and understanding between the government and telecommunications experts, who are not directly involved with the government or the ARTP. Since the meetings of Group of Reflection on Competition and Growth (GRCC) that led to the liberalization of telecommunications, there have been few discussions on reform issues involving a diversified group of telecommunications stakeholders. One interviewee recalls that 2004 was the year that the last open talk on telecommunications involving various stakeholders, such as the government, operators, experts, unions, civil society and the ARTP, took place. According to the same interviewee, there was no continuation or concrete action taken to follow experts' recommendations on reform needed for the sector. The inaction was due to a misunderstanding or misalignment in vision between the government and experts.

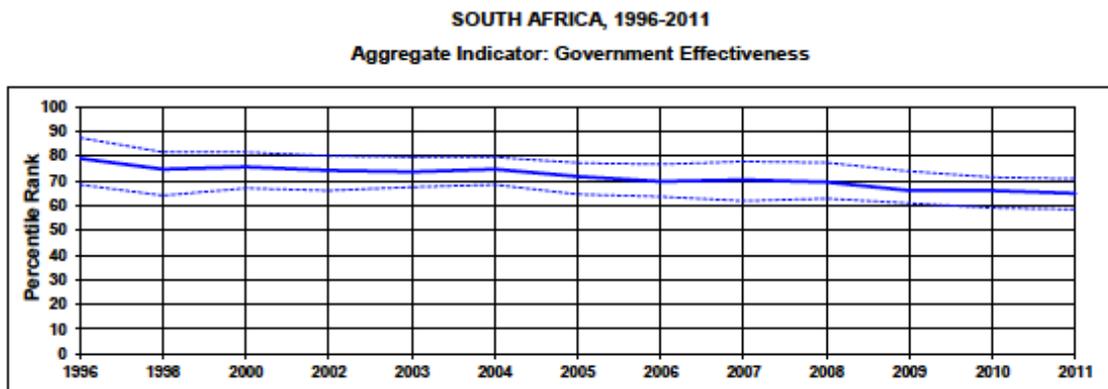
**Governance effectiveness.** According to The World Bank Group (2012), governance effectiveness capture perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.

Compared to South Africa, Senegal displays lower levels of governance effectiveness. Since 1996, the perception of governance effectiveness in Senegal has been declining. In 2011, Figure 6 shows that Senegal was ranked at the 40<sup>th</sup> percentile, while Figure 7 shows that South Africa was ranked between the 65<sup>th</sup> and 70<sup>th</sup> percentile.

**Figure 6**



**Figure 7**



Government effectiveness in the case of the Senegalese telecommunications sector requires improving the stability of institutional, developing a viable strategy for the development of telecommunications and attracting more telecommunications policy experts in the government.

Regarding institutional instability in the Senegalese telecommunications sector, many interviewees highlighted the dissolution of the minister of telecommunications in

the early 2000s. The ministry of telecommunications was scrapped from Senegal's list of ministries and some of its responsibilities were transferred to a smaller ministry; the minister of information. Nevertheless, the dissolution of the minister of telecommunications was influenced by the government's creation of the regulatory authority for telecommunications, the ARTP that was tied to the Office of the Prime Minister. The dissolution of the ministry of telecommunications hindered the policy reform. How could any strategy for the development of the sector or regulations be implemented without a minister of telecommunications? Then, the ARTP combined the roles of regulating the sector and developing strategies. Given the dominant technical background of the first wave of ARTP's employees, who mainly came from SONATEL, it is understandable that the required expertise for making effective regulations and policies were missing.

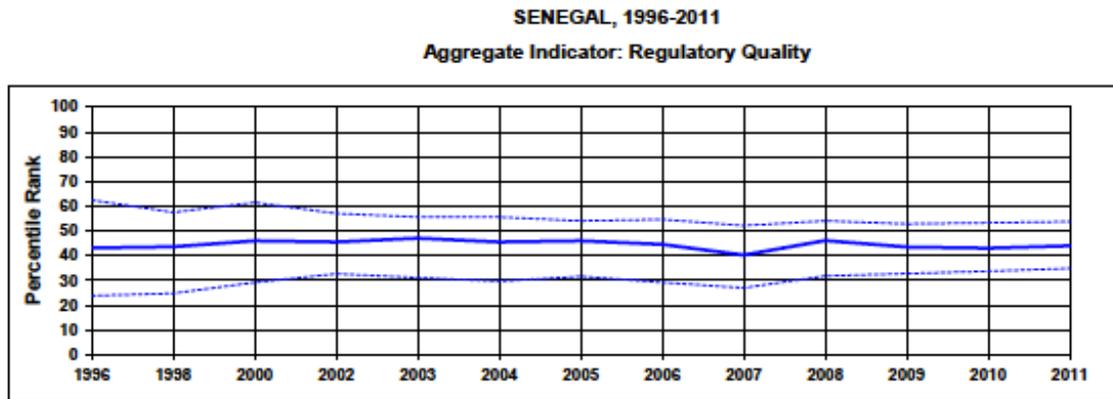
The lack of government strategy for developing the telecommunications sector is another factor mentioned by interviewees as affecting the policy reform. Indeed, interviewees were unanimous in pointing out the fact that the lack of strategy for the development of the telecommunications sector was a major barrier for reform. According to one interviewee, the last open discussion between various actors and the government on a potential strategy for the development of the Senegalese telecommunications sector was in 2004. No decision was made going forward in terms of the sector's development plan and the reform to be undertaken. On the other hand, the government prepared a strategy for the development of the Information and Communication Technology (ICT) industry.

Interviewees highlighted that another factor hindering the policy reform was the lack of government expertise in certain decision-making roles. For instance, in an interview published in the Senegalese newspaper *Walfadjri*, Ndiongue (2012), who was interviewed on his perception about the expertise of the government's negotiators for the global license granted to TIGO in 2012, responded that he believed that the negotiators did not have the necessary experience to negotiate well the licensing agreements in favor of Senegalese customers. As mentioned in earlier in the paper, the amount that TIGO paid for obtaining global license was undervalued. TIGO paid 53 billion FCFA to obtain a global license; a small amount according to Ndiongue (2012) who argues that TIGO should have paid at least 100 billion FCFA.

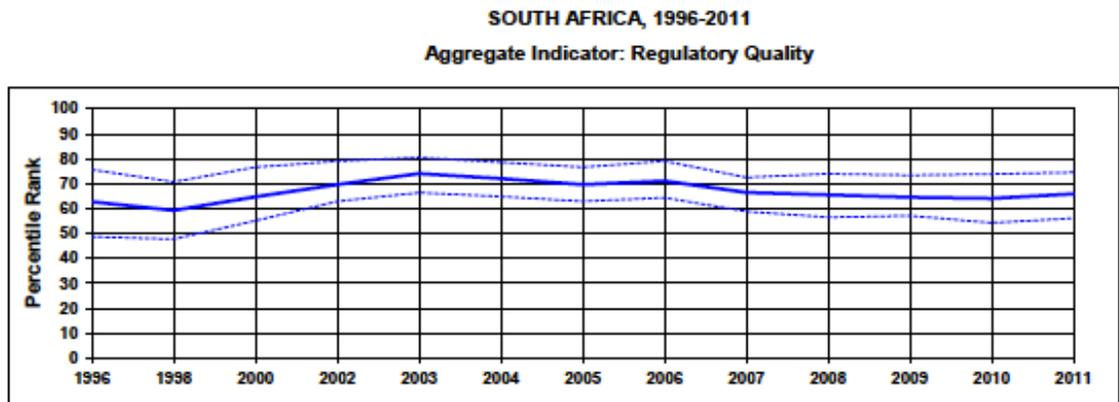
**Regulatory quality.** According to The World Bank Group (2012), regulatory quality captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.

Compared to South Africa, Senegal displays less regulatory quality. Since 1996, the perception of regulatory quality in Senegal has stagnated. In 2011, Figure 8 shows that Senegal was ranked between the 40<sup>th</sup> and 45<sup>th</sup> percentile, while Figure 9 shows that South Africa was ranked between the 65<sup>th</sup> and 70<sup>th</sup> percentile.

**Figure 8**



**Figure 9**



Regulatory quality in the case of the Senegalese telecommunications sector requires the creation of a truly independent and strong regulatory authority.

The absence of regulatory authority in telecommunications affected effective policy reform after the liberalization of the sector in 1997. One interviewee mentioned that the creation of the ARTP after the liberalization was a barrier to the reform process. The ARTP did not set up the rules of the game in the period between the liberalization and the creation on the ARTP. Before the creation of the ARTP, SONATEL and the senegalese government were in charge of regulating the telecommunications sector. This

equates to at least four years, from 1997-2001, where SONATEL freely decided how it wanted the telecommunications sector to develop.

A more recent factor that hinders the effective policy reform of telecommunication is the lack of independence of the ARTP. As mentioned earlier in the literature review, since the creation of the ARTP, the President of Senegal nominates the ARTP's Executive Director. This results in a conflict of interests between the ARTP, the government, and SONATEL given that the government owns 27% of the operator's shares. Thus, it is fair to question how effective policy reform can be undertaken in a sector where the ARTP, and SONATEL are not independent from the government.

Various authors in the literature such as McCormick (2002), Noam (1999) and Adomi (2005) depicted the lack of strong and independent regulatory authority as a weakness for the development of a country's telecommunications sector. It would be a great challenge to attempt to bring sustainable reform to a country's telecommunications sector without the presence of an true independent regulatory authority. Nigeria understood that in order to reform its telecommunications sector and enhance the country's low national call competition rate it needed to set up a strong and independent regulator. As a result, the Nigerian Communications Commission (NCC) was established in 1992 and one reform that it took was to set out guidelines for private sector participants to contribute to the diffusion of Internet and other medium of communications in Nigeria (Adomi, 2005).

## **Conclusion**

Senegal's telecommunications sector has a significant impact on socio-economic development in Senegal, as it contributes to 6.7% of the country's GDP. The historical telecommunications reform process has allowed Senegal, according to some interviewees, to develop some of the best telecommunications infrastructure in the sub-Saharan Africa. The decision to privatize, liberalize, and create a regulatory authority was accomplished with the involvement of many stakeholders, through the GRCC's taskforce. Since a new government came into power in 2000, there have been fewer discussions on the telecommunications sector reform involving multiple stakeholders. The Senegalese telecommunications sector has faced many controversial issues, resulting in the degradation of the integrity of the ARTP and the Senegalese government. Given the three categories identified that directly impact policy reform – voice and accountability, government effectiveness, regulatory quality – improvement needs to be undertaken in these categories in order for the sector to fulfill its potential as a factor of economic development. Perhaps, the most pressing reform would be the creation of a truly independent regulator.

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