

## **Subject: How to turn regulators into architects of the digital ecosystem**

### **Background**

In Senegal, the digital ecosystem is going through an important stage in its development phase, characterized by remarkable performance in terms of quantitative indicators but with underlying structural imbalances. With a mobile penetration rate of 133.23 per cent and an Internet penetration rate of 116.55 per cent as at the fourth quarter of 2024, the telecommunication sector boasts some of the highest connectivity indicators in West Africa. However, this apparent technological maturity masks a worrying trend towards monopolistic concentration that is hindering the emergence of a truly dynamic and inclusive digital ecosystem.

A market share analysis reveals that Orange is dominant across all segments: 58.68 per cent of mobile market, 75.87 per cent of voice traffic, 99.88 per cent of fixed Internet and 97.1 per cent of mobile Internet traffic. This oligopoly, combined with a regulatory framework that is ill suited to the realities of the digital economy, weighs on innovation and technological entrepreneurship. Paradoxically, the emergence of disruptive players such as ProMobile, a mobile virtual network operator (MVNO) which recorded exceptional growth of 12.05 per cent over the period, shows that there is latent competitive potential that must be tapped into.

In this context, the Senegalese Regulatory Authority for Telecommunications and Posts (ARTP), to be a true architect of the digital ecosystem, must undergo a paradigm shift, adopting a systemic approach that goes beyond simple surveillance of competition and embraces a forward-looking vision of economic and technological development.

### **I      Need for asymmetric regulation to address de facto monopolies**

A granular analysis of the Senegalese telecommunication market reveals imbalances in competition that require targeted regulatory intervention. Orange's quasi-monopoly on the fixed Internet segment (99.88 per cent market share) is a structural obstacle to the development of the digital economy, insofar as the emergence of competitive technology companies depends on access to fixed broadband.

Cognizant of this, ARTP intends to implement robust asymmetric regulation, imposing specific obligations on the dominant operator to open up its critical infrastructure. Essential levers for boosting competition include local loop unbundling, non-discriminatory access to optical fibre infrastructure based on cost-oriented pricing, and functional separation between infrastructure and service activities.

This approach, however, must be accompanied by a revision of the spectrum auction framework, incorporating mechanisms that promote competition, such as the reservation of radio-frequency blocks for new entrants and obligations to ensure balanced territorial coverage. The goal is to change spectrum management from a simple means of maximizing public revenues into a strategic lever of nationwide digital development.

### **II      MVNOs as a driver for innovation and democratization of technology**

The emergence of ProMobile, with a remarkable 12.05 per cent increase in its subscriber base, illustrates the disruptive potential of MVNOs in reshaping the competitive landscape. This growth

trend, observed in a seemingly saturated market (with a penetration rate of 133.23 per cent), shows that there is a latent demand for alternative business models and differentiated value propositions.

In this respect, regulation must capitalize on this trend by establishing a regulatory framework specifically adapted to the development of MVNOs. A viable MVNO ecosystem could be built on the foundations of a separate licensing regime, the obligation for dominant operators to open their networks with transparent and non-discriminatory tariffs, and the creation of a dispute settlement mechanism.

However, this approach must be part of a three-pronged strategy: facilitating market entry by simplifying administrative procedures, protecting against anti-competitive practices by monitoring margin squeezes, and fostering innovation through guaranteed access to new technologies (5G, Internet of Things). The objective is to turn MVNOs into motors for the democratization of technology, in particular in segments that are underserved or underexploited by traditional operators.

### **III Technological transition as an opportunity for competitive rebalancing**

An analysis of mobile technology distribution in Senegal and West Africa shows an accelerated transition towards next-generation infrastructure. For example, in Senegal, 63.31 per cent of mobile Internet users use 4G (accounting for 86.85 per cent of traffic), while 1.63 percent have already adopted 5G. This technological evolution provides the regulator with an exceptional window of opportunity to redefine competitive balance and promote innovation.

Regulatory strategy in this case must focus on the pooling of investment in 5G infrastructure with a view to fostering the emergence of competitive alternatives. Thus, the mandatory sharing of sites and towers, coordination of deployments to optimize territorial coverage and the establishment of investment consortia involving various market players are all means of promoting democratization of advanced technologies.

Moreover, an analysis of the increase in average monthly mobile data consumption per user (i.e. 3.64 GB up from 3.52 GB in the previous quarter) suggests a growing demand for advanced digital services. This behavioural shift provides fertile ground for the emergence of technology startups that focus on value-added services, provided that regulators facilitate their access to telecommunication infrastructure under economically viable conditions.

### **IV Tax and financial optimization: a lever for territorial attractiveness**

In general, we find that African digital ecosystems, despite their quantitative performance, continue to face structural financing challenges that limit their development potential. Market concentration around dominant players reduces investment opportunities for technology entrepreneurs, while a tax framework ill-suited to the particular nature of digital business models is an added deterrent.

Regulators, in collaboration with tax authorities, must design an incentive scheme targeting digital startups, incorporating progressive exemption mechanisms, tax credits for research and development and simplified tax reporting. Similarly, setting of a preferential tax status for MVNOs in the launch phase, temporary exemption from certain sector-specific taxes for innovative technology companies and harmonization of tax rates with international standards are crucial to enhancing territorial attractiveness.

This approach must go hand in hand with a reform of the prudential framework for financial institutions in order to facilitate technology companies' access to credit. The relaxation of solvency ratios for innovation financing, recognition of intangible assets as eligible collateral and the introduction of specialized public guarantee mechanisms are essential to unlocking national savings for the benefit of the digital economy.

## **V Collaborative governance: the foundation of proactive regulation**

The increasing complexity of digital ecosystems, typified by technological diversification and rapid evolution of use cases, necessitates the adoption of a collaborative and forward-looking regulatory approach. Traditional regulators, built on ex-post surveillance practices, must develop capacity to anticipate and support innovation.

For this reason, regulatory sandboxes are a particularly useful tool, as they allow technology startups to experiment with innovative solutions in a relaxed regulatory environment. These spaces for controlled experimentation must be designed using a differentiated sector-specific approach, taking into account the particular nature of telecommunications, digital financial services and emerging technologies (e.g. blockchain, artificial intelligence, Internet of Things).

## **Conclusion**

Turning regulators into true architects of the digital ecosystem is a systemic challenge that goes far beyond a simple modernization of regulatory instruments. The success of this transformation shall depend on the ability of the regulatory authorities to manage a multidimensional approach combining targeted asymmetric regulation, facilitation of the emergence of alternative players, optimization of the fiscal and financial framework, and forward-looking collaborative governance.

The strategic challenge goes beyond simple sectoral regulation to embrace a geopolitical vision of digital development. Against a backdrop of increased international competition for technological investment and talent, there is a clear need for intelligent and forward-looking regulation.

The window of opportunity offered by the technological transition to 5G and the emergence of new paradigms (e.g. Internet of Things, artificial intelligence, blockchain) is a pivotal moment for redefining competitive balance. This ambition requires the coordinated mobilization of all public and private stakeholders, driven by regulators transformed into veritable institutional entrepreneurs of the digital economy.

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