



# Connecting the “Unconnected” in Sub-Saharan Africa

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**Connecting the “Unconnected”  
in Sub-Saharan Africa:  
Postal Networks Can Leverage Access  
to Infrastructure Services**

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With more than 80% of post offices in Sub-Saharan Africa located in small- and medium-sized cities and rural areas, a well-managed postal network, in strong partnership with other providers of infrastructure and network services, could establish itself as a critical link that binds all other networks together and helps move the “unconnected” out of the poverty trap.

### **Missing Linkages are Jeopardizing Connectivity**

Mobile telephony coverage has been dramatically expanding in Sub-Saharan Africa (SSA) over the last decade: more people than ever before have become potentially reachable. It is often celebrated as one of the most impressive achievements in Africa. At the same time, there is no evidence that the development of domestic and international trade of good and services has been equally successful in SSA, particularly in the many small- and medium-sized cities and rural areas, where more than 80% of the median Sub-Saharan African country's population currently lives<sup>1</sup>. In the latter areas, access to basic services such as electricity, water and sanitation is far from being satisfactory. Access to other networks that provide financial services are not widely available for citizens and small local entrepreneurs of these cities. Formal systems of payments are often missing. Unlike in the mobile telephony sector, most SSA networks remain very incomplete, with small- and medium-sized cities and rural areas suffering the lowest access rates.

This dichotomy between the tremendous increase in access to mobile communication country-wide on the one hand, and the much less impressive evolution of the actual trade and access to basic utilities and other network services on the other hand, is neither a matter of technological progress only, nor of simple bad luck or fate. It could well be that this dichotomy also reflects missing linkages between basic infrastructures and networks. People and traders are “disconnected” from each other due to many gaps between or within different types of networks, which are often complements to each other rather than substitutes. These gaps between networks disable in turn numerous trade opportunities, increase transaction costs and oblige traders to rely on insecure and inefficient informal trading channels.

How long will the so-many small local entrepreneurs who live in the increasing number of small- and medium-sized SSA cities of their country be willing to maintain and develop their businesses, instead of looking for better fortune in the largest crowded urban centers with their families? The answer is likely to depend, among other equally important factors, on the overall level of connectivity that their community can access. Yet connectivity should not be restricted to digital communication only: the level of physical connectivity that a community can access is just as important. Economic activity is often about connecting the largest possible number of people. In this respect, digital connectivity can help improve access to the information created and transmitted by the connected people. However, digital connectivity alone is not enough to trigger more trade: physical connectivity is eventually needed to seize the opportunities brought by greater access to information through digital communication technologies nowadays. Goods must be traded, collected, transported, delivered and paid, before eventually being more effectively consumed by people using services such as electrical power or clean water. If digital and physical connectivity is to reduce poverty, then partnerships between networks must be closely examined so that the resources needed to provide infrastructure services in many small and medium-sized cities as well as rural areas are better shared, and the unit costs of delivering these services considerably reduced. Partnerships could help achieve an increased consumption of infrastructure services and improve the overall governance of infrastructures. A better coordination of the provision of a large array of infrastructure services would trigger positive spillovers that would simultaneously affect all infrastructures, regardless of their more or less direct link with connectivity issues. In the end,

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<sup>1</sup> Ansón, J. and J. Toledano (2007). “Survey of Postal Delivery in Sub-Saharan Africa: Final Report”. Universal Postal Union, mimeo, Bern. Available at: [http://www.upu.int/document/2007/an/cep\\_gp\\_econ\\_post-1/d002.pdf](http://www.upu.int/document/2007/an/cep_gp_econ_post-1/d002.pdf)

many people living in the periphery, such as in small- and medium-sized cities or rural areas, would gain greater access to a basic set of infrastructures and networks, which could be coordinated for a better delivery of communication, financial, energy, and health-related services. With more than 80% of SSA post offices geographically placed in small- and medium-sized cities and rural areas<sup>2</sup>, a well-managed postal network, in strong partnership with other providers of infrastructure and network services, would help move the “unconnected” out of the poverty trap as it establishes itself as one of the missing links that binds the others together.

## **Jointly Supplying the “Unconnected”: the Benefits of Coordinating the Provision of Access to Infrastructure Services**

In SSA, as well as in other low-income countries regions, the postal networks must sensibly contribute to a greater economic viability and sustainability of a rising digital, physical and financial connectivity. Telecenters, targeting small local entrepreneurs, could become commercially viable more quickly by means of public-private partnerships with the postal networks. Such postal networks could support more effectively policies targeting an expanded access to electricity, water and sanitation in small- and medium-sized cities, where electricity and water companies often lack subsidiaries for organizing billing and the collection of payments. An efficient postal network can also be a reliable partner for delivering pre-paid cards on behalf of other networks and infrastructures. Internationally interconnected postal networks could support the development of regional and global trade, help identify traders to raise trust, ensure that migrants’ remittances can also directly reach many small- and medium-sized cities and be invested in local entrepreneurship projects, instead of being informally conveyed and contributing to today’s local consumption only. Post offices could even be franchised and managed by local entrepreneurs in small- and medium-sized cities. Combining an optimal number of functions, which practically depends on each country’s specificities, will offer significant savings over providing them separately<sup>3</sup>. These savings will facilitate greater access to a full range of infrastructure and network services, which could seem unrelated at first glance. The good news is that this is no utopia: a number of postal networks in developing countries are already participating in the joint delivery of infrastructure and network services.

The main economic rationale for a better coordination of the provision of infrastructure and networks services is to be found in economies of scale and economies of scope. Reducing the fixed cost element of the provision of telecenters in small- and medium-sized cities, as well as rural areas, will mitigate the problems of diseconomies of scale in remote and small market places. Post offices can greatly contribute in this respect and enable a more ubiquitous coverage in the offering of ICT services, while empowering many local entrepreneurs with the management of their telecenters. This will help achieve networks’ completeness in those areas, and lower the likelihood of missing linkages. It is well-known that telecenters benefit from being part of a larger organization since the latter is more effective in undertaking bulk procurement of equipment and of software licences<sup>4</sup>. Telecenter activities could be further fed by the billing support activities provided by postal networks to utility companies in small- and medium-sized towns, ultimately connecting them to their respective headquarters in capital cities.

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<sup>2</sup> Ansón, J. and J. Toledano (2007). “Survey of Postal Delivery in Sub-Saharan Africa: Final Report”. Universal Postal Union, mimeo, Bern. Available at: [http://www.upu.int/document/2007/an/cep\\_gp\\_econ\\_post-1/d002.pdf](http://www.upu.int/document/2007/an/cep_gp_econ_post-1/d002.pdf)

<sup>3</sup> Kenny, C., Navas-Sabater J. and C.Z. Qiang (2000). “ICTs and Poverty”. The World Bank Group, mimeo, Washington DC. Available at: <http://www.augustana.ca/rdx/eng/documents/ICT4D/ICTsandPoverty.pdf>

<sup>4</sup> Wellenius, B. (2003). “Sustainable Telecenters: a Guide for Government Policy”. Public Policy for the Private Sector, note number 251, The World Bank Group, Washington DC. Available at: <http://rru.worldbank.org/Documents/PublicPolicyJournal/251Welle-121302.pdf>

Connecting infrastructure networks such as the post, water, power, telecommunications and other utilities in peripheral regions is very likely to trigger unexpected economic efficiency gains.

Furthermore, these activities are not new for postal networks in developing countries. Some Brazilian postmen for example read electricity meters, and actively prepare bills and collect payments on behalf of electricity companies (the same experience is led in Malaysia). The Brazilian postal network has also provided the population access to basic financial services through a partnership with a private sector bank, Bradesco, providing the first Banco Postal subsidiaries in isolated communities without any access to banking services. Today the Brazilian Post further reaps the benefits of economies of scope by offering export facilitation services to small entrepreneurs<sup>5</sup>. The regional diversity of Brazil as a country reminds us of Africa's own heterogeneity. Brazil's experiences highlight the fact that it is possible to make the best possible use of better coordinated networks, regardless of whether the operators are public or private. Today the Brazilian Post is top-ranked among institutions the Brazilian people trust most, and it is judged to be even more reliable than the family. Eventually, recent econometric evidence by World Bank and Inter-American Development Bank economists<sup>6</sup> was also found for supporting the hypothesis that the joint provision of infrastructure services enabled Peruvian households to reach higher consumption levels. The welfare of households jointly receiving two or more services was proven to be larger than when services were provided separately. Very interestingly, the increase in households' welfare appeared to be more than proportional. These effects could presumably be even stronger in lower income countries like those in SSA.

### **Fostering the Demand of Infrastructure Services by the "Jointly Connected": Reaping the Benefits of "Club effects"**

The economic benefits of providing joint access to a basket of infrastructures and ICT services are not to be found on the supply side only. Network externalities – the so-called "club effects" – will also affect positively the demand of these services. Trade and communication have the following in common: the larger the number of people you can communicate and effectively trade with, the more valuable the services provided through infrastructures and networks become for consumers. This increases in turn the demand for these services, multiplies the number of exchanges, and further reduces the unit costs of providing them. A virtuous cycle emerges, which help infrastructures achieve a greater economic viability, thereby encouraging further investments, which feed in turn a stronger "club effect".

Similarly, the interconnection of international ubiquitous postal networks for the provision of physical, financial and electronic communication services ensures low-income countries with unequalled regional and global outreach that can support the networks' domestic development. Interconnection helps bring the critical network size to otherwise isolated small communication networks, linking half a million post offices in the developing world with nearly two hundred thousand post offices in the developed world. International club effects are as much important as domestic club effects in a globalizing environment, the doors of which must be more effectively opened to the small- and medium-sized cities and rural areas in low-income SSA countries. Multiple-dimensional partnerships, as presented above, can further multiply these effects.

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<sup>5</sup> Boillat, M. and P. Donohoe (2007). "The Postal Sector — a Key Facilitator of Global Commerce for SMEs". Available at: [http://www.unctadxi.org/sections/WSIS/docs/2AL\\_C7/The\\_Postal\\_Sector.pdf](http://www.unctadxi.org/sections/WSIS/docs/2AL_C7/The_Postal_Sector.pdf)

<sup>6</sup> Chong, A., Hentschel J., and J. Saavedra (2004). "Bundling of Services and Household Welfare in Developing Countries Using Panel Data: the Case of Peru". Inter-American Development Bank Working Paper 489, IADB, Washington DC. Available at: <http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=7883>

## **Achieving Better Coordinated Infrastructures Governance: Encourage Sound Multi-Sector and Regional Integrated Reforms**

Economies of scope are very much of organizational nature. In countries pursuing the achievement of the Millennium Development Goals by 2015, resources for development cannot be wasted. This is why the organizational efforts for delivering better infrastructure services could be pooled when coordination is likely to lead to a greater access to services. If the nodes of the different networks are better combined for offering joint services, whatever effectively links these multiple-dimensioned nodes, such as roads, telephony coverage or electricity lines must ensure a permanent and effective connection between them. This requires a coordinated governance of infrastructures, while separate ownership or independent management is maintained.

Fostering strong partnerships between infrastructures and networks would also help implement reform in sectors where the resistance of special interests groups is the strongest. Networks in SSA and other low-income countries cannot be captured for the interests of a few, but must be allowed to serve as many communities as possible in the most effective and durable way. A multi-sector integrated approach to infrastructures reforms can deliver high economic efficiency and social gains. At the regional level, multi-country integrated reforms can produce very much the same positive effects.

### **The UPU at work in Africa**

The Universal Postal Union, a specialized agency of the United Nations responsible for international postal services, has made Africa one of its priorities, with a number of its activities geared to helping the continent achieve the UN Millennium Development Goals by 2015. In Africa, 18% of the population has no postal service, 60% has to collect mail from a postal establishment, and 22% has mail delivered at home (the worldwide average is 82%). More than anywhere else, whole sections of civil society, the service and public sectors and the financial services depend on the postal infrastructure. That is why the UPU is helping African postal operators to expand their activities within a three-dimensional (physical, electronic and financial) world postal network. Here are a few projects and activities that will help Africa's postal sector deliver on the promise.

## ***Financial services***

A first project group, the Bamako group (5 countries), agreed to offer uniform tariffs for money transfers throughout their region. Furthermore, to be able to offer such a service even in remote regions without Internet access, the UPU is testing the sending of information through call centres. This should facilitate remittance transfers, which is a key issue for the region's development. Furthermore, the multilateral element of such an approach allows build intra African exchanges. More broadly, the UPU is helping its member countries (including those in Africa) modernize their postal financial services by joining its international financial network, which provides access to affordable, secure and reliable money transfer services. Such services are increasingly important as the number of international migrant rises. Twelve African countries today use the UPU's International Financial System (IFS), a software application designed to facilitate rapid, reliable, secure, time-certain money transfers, with urgent or ordinary money orders able to be tracked and traced continuously.

## **Quality of service**

The UPU is developing addressing and postcodes systems to improve the quality of service on the continent. Another project was launched in 2004 to transmit the mail more effectively in the ECOWAS region by reducing delivery time by road. For example, between Lagos and Cotonou, the average mail transmission time in 2004 was J+60 (60 working days after posting), a figure which had been slashed to J+3 by 2007. The results of the UPU International Bureau's continuous tests show that 53% of mail items sent between countries in the region are delivered within five days of posting (the worldwide standard is 65%). In order to improve their quality of service, countries can obtain financing for their projects through the UPU's Quality of Service Fund (QSF). Of a total of 369 projects adopted between April 2001 and May 2007, 78 concern African countries, representing a budget of over six million USD.

## ***Postal reform and development***

Following a request by Liberia in 2006, the UPU has developed a master plan to help the country reconstruct its postal service, left almost inoperable after 14 years of war. Pilot projects are currently conducted in Benin and Malawi for better defining universal service policies. The UPU comes to countries' assistance with different developments models. Since 2005, integrated postal reform and development plans (IPDPs) have been formulated in eleven African countries. The IPDP is a new cooperation mechanism including all stakeholders and designed to provide direction and guidance for reform and development of postal services in developing countries and respond to the requirements of the UPU strategy.

In Africa, the UPU also operates regional deployment and training centers, has regional advisers in Cotonou (Benin) and Harare (Zimbabwe) and provides assistance on site.

**For more information:**

**[www.upu.int](http://www.upu.int)**

**Union Postale, the UPU's quarterly magazine:**

**[www.upu.int/union\\_postale/en/index.shtml](http://www.upu.int/union_postale/en/index.shtml)**

### ***About the author***

Dr. José Ansón, economist at the International Bureau of the Universal Postal Union (UPU), has broad experience in applied economic policy analysis. His current research at the UPU focuses on sector reform in developing countries, poverty reduction strategies, Millennium Development Goals and the interconnection of international networks. In the last two years, he has conducted in-depth economic research about Sub-Saharan African postal networks, and performed field missions to several areas. Before working at UPU, he contributed to international trade research at the Development Economics department of the World Bank and at the World Trade Organization. His expertise in trade-related matters such as customs' governance or the design of preferential market access rules for least developed countries is recognized internationally.

### **About the Universal Postal Union**

The UPU, a United Nations specialized agency based in Berne (Switzerland), is the primary forum for cooperation between Posts. In addition to maintaining a genuinely universal network that provides modern products and services, it establishes the rules for international mail exchanges among its 191 members, thus ensuring the network's worldwide interconnectivity, and makes recommendations to stimulate mail volume growth and to improve the quality of service for customers. The world postal network includes 660,000 permanent post offices. Each year, more than five million employees process and deliver 431 billion domestic letter-post items, some 5.6 billion international items and 6 billion ordinary parcels.



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BERNE OCTOBER 2007