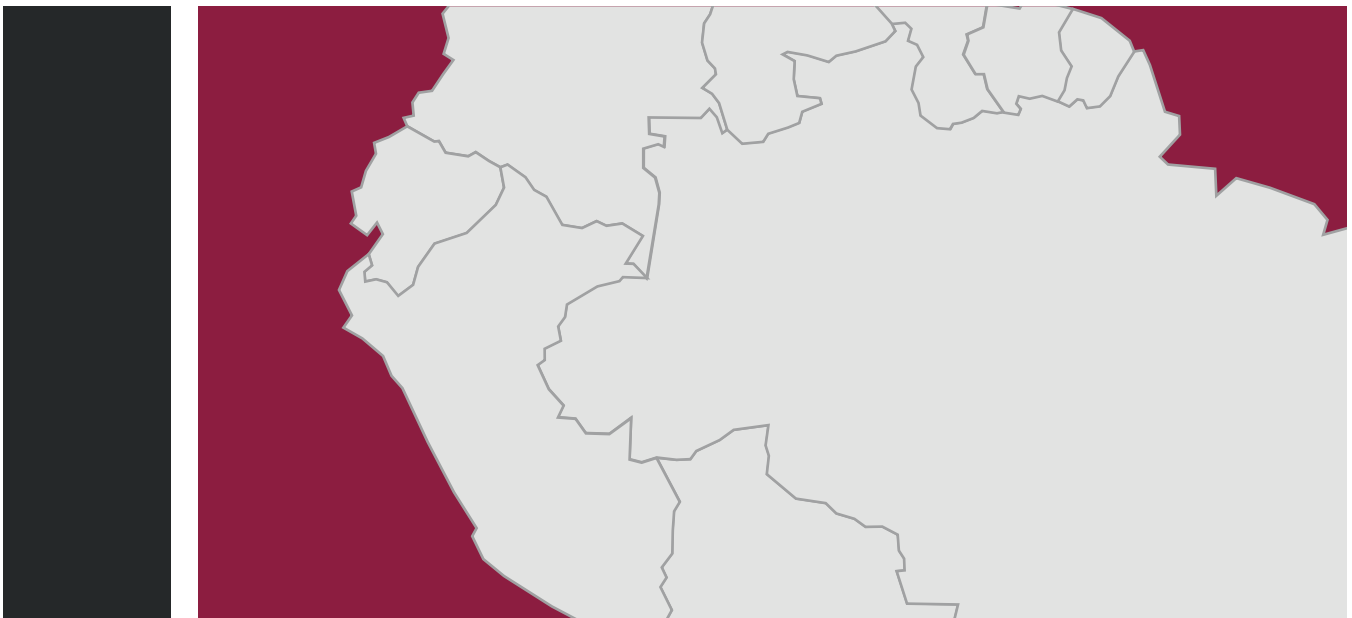


MODERNIZATION THROUGH PUBLIC-PRIVATE PARTNERSHIP:

AN ANALYSIS OF HAITI'S NATCOM



PREFACE

Assassination in Port au Prince. Bribery trials in Florida. \$76 million secretly syphoned into U.S. bank accounts. Prominent American political figures with sweetheart deals. 4,000 patronage jobs. Sabotaging of phone lines and fiber optic networks. All while having one of the lowest penetration rates of phone service in the world. These are but just a few symptoms of the corruption that pervaded the Haitian state-run telecommunications organization, Teleco.¹ By 2007, it was bleeding cash and nearly unable to provide even minimal service, and the Central Bank of Haiti (BRH) was forced to subsidize the failing company with more than \$1 million monthly.² To ease the burden on BRH, the Government of Haiti (GoH) proposed a sell-off of 60 percent of Teleco to a private company. Though this was embraced by some as a way to both improve service and rid the government of a financial burden, critics called the proposed privatization a “farce” and demanded that “the government account for the profitability of earlier ...privatizations.”³

In April 2010, despite the earlier outcry from critics, the governor of the BRH, Charles Castell, announced the formation of a new public-private partnership. The GoH and Viettel, a telecommunications company from Vietnam, would partner to create a new telecommunications entity, Natcom. He optimistically stated: “Viettel’s commitment is a sign of confidence sent to other private sector investors interested in development efforts and reconstruction of Haiti.”^{4 5}

■ EXECUTIVE SUMMARY

Developing a stable, comprehensive, and countrywide state telecommunications network in Haiti has always seemed like a Herculean task. Haiti suffers from deep and pervasive poverty, a history of political instability and corruption, and frequent natural disasters. In spite of these challenges, the GoH believed that a telecommunications network was key to Haiti's economic recovery program. Beginning in 1996, the GoH, under the first administration of President René Préval, targeted the modernization of select public enterprises through public-private partnerships (P3s) to stimulate sustainable long-term economic growth.⁶ Teleco, the state-owned telecom company, was a primary target for privatization. Corrupt, inefficient, and lacking operational capacity and working capital, it was seen not only as a serious hindrance to rebuilding the country's economy but also as an economic drain in and of itself.

The GoH, through the International Finance Corporation (IFC)⁷, issued an Information Memorandum in September 2008 inviting private sector companies to participate in a tender procedure for the selection of a private investor. The outcome of the tender would be the incorporation of a new company that would assume the responsibility of providing an array of telecommunications services throughout Haiti. Of the many initial statements of interests, only three companies submitted bids. Of those, the IFC determined that only the bid by Viettel Group (Viettel) (Tập đoàn Viễn thông Quân đội) met all the requirements of the tender offer. Viettel is Vietnam's largest mobile network operator. It is a state-owned enterprise wholly owned and operated by Vietnam's Ministry of Defense. The Central Bank of Haiti and Viettel signed a contract in April 2010 that created a new company, Haiti National Telecommunications S.A. (Natcom), which launched service in September 2011.

This new P3 enhanced the overall state of telecommunications in Haiti. The creation of Natcom brought a measure of stability to the BRH and Conseil National des Télécommunications (CONATEL), the state telecom regulatory agency. The BRH is no longer using its cash resources to prop up a financially untenable Teleco, and the partnership has allowed CONATEL to pay closer attention to needed regulatory reform.

In addition, the entry of Natcom into the mobile market spurred the other mobile operator, Digicel, to increase its efforts to broaden its presence, resulting in deeper mobile penetration and greater countrywide coverage, specifically with regards to interconnectivity and number portability between providers. More competition has led to the diversification of products, services, and plans to reach a larger number of potential customers and to a more competitive pricing structure. The introduction of mobile banking and the competition between mobile providers also induced economic activity, especially at the micro level. Finally, Natcom's desire to bite into Digicel's large market share led it to initiate several corporate social responsibility practices in response to Digicel's extensive philanthropic program in Haiti.

There are still lingering questions, however, with regards to the ability of Natcom to fulfill all its obligations under the tender, particularly its obligations to secure fixed line telephony, construct a reliable fiber optic network, and open a second international gateway. Its sustained presence in Haiti is also questionable considering that it holds only a 5 percent share of the mobile market while its major competitor, Digicel holds 89 percent. Finally, there are questions about Viettel's financial transparency and management style that many say is not sensitive to Haitian society and culture.

■ A NATION OF EXTREMES

Haiti has struggled to overcome centuries of authoritarianism, poor access to education, a lack of working infrastructure, and extreme poverty and economic disparity. Public administrations and democratic institutions have been historically weak, leading to a chronically unstable political environment and fragile economy.⁸

Since the 2010 earthquake, unemployment has plagued the country. Three-quarters of the population are now unemployed or living off the informal economy. Jobs are sparse, particularly after NGOs' efforts after the earthquake waned. Once called the "Republic of NGOs," Haiti is now cynically referred to as the "Republic of the Unemployed." Political and social instability and a lack of infrastructure have dampened incentives for investors to establish new businesses in Haiti and create jobs.⁹

A NATION OF POVERTY

Haiti is the poorest country in the Americas and one of the poorest in the world, with a GNI per capita of \$760 in 2012.¹⁰ Over half of its population (54 percent)¹¹ of 10 million lives in extreme poverty, subsisting on less than \$1 per day, and approximately 80 percent lives on less than \$2 per day.¹² Poverty among the rural population is even more widespread: 69 percent of rural dwellers live on less than \$1 a day, and 86 percent live on less than \$2 a day.¹³ Compounding this, Haiti has the second-largest income disparity in the world. Over 68 percent of the total national income accrues to the wealthiest 20 percent of the population, while less than 1.5 percent is held by the poorest 20 percent.¹⁴ Finally, the government struggles to provide basic needs for its citizens, a situation much exacerbated by the devastating earthquake in January 2010.

A NATION DEVASTATED BY NATURAL DISASTERS

Haiti is uniquely vulnerable to earthquakes because of its location on the shifting Caribbean plates. The country also has the misfortune of being located along the hurricane track and is often in the path of destructive tropical storms. Accordingly, the list of catastrophes that have ravaged Haiti is mind-numbing: the January 2010 earthquake; four tropical storms or hurricanes in 2008 alone; killer storms in 2005 and 2004; and floods in 2007, 2006, 2003 (twice), and 2002. Poverty, low literacy rates, deforestation, poor building standards, and unregulated construction practices amplify the destructive effect of disasters.

In addition, Haiti leads the hemisphere in tree clearing; wood is used for cooking, as other forms of fuel are too expensive for most of the population. Deforestation, in turn, leads to mudslides and flooding. The flooding increases erosion which then worsens flooding from the next storm. Exacerbating all of these disasters is the systemic corruption of the country, which prevents the government from responding and rebuilding in a way that would prevent the worst effects of future disasters.

When the GoH and Viettel created Natcom, governor of the BRH, Charles Castell suggested that the P3 would instill confidence in other private sector players who may at first be hesitant to partner with the government. What are the challenges and advantages to using a public-private partnership structure in an environment that is so politically and environmentally unstable?

A NATION PLAGUED BY CORRUPTION

According to Transparency International, Haiti ranked 19 out of 177 countries¹⁵ in the Corruption Perceptions Index, the worst score in the Caribbean. Since its independence in 1804, Haiti has been plagued by leaders who have looted the country and its people. One of the most notorious periods of corruption was the dictatorship of Francois Duvalier and his son, Jean-Claude Duvalier, between 1957 and 1986. The leaders are believed to have tortured and murdered tens of thousands of Haitians and embezzled up to 80 percent of Haiti's international aid.¹⁶ Even under democratic rule, which began in the late 1980s, Haitian politics continues to be punctuated by coups and accusations of mismanagement, embezzlement, and human rights abuses.

■ P3'S IN HAITI, A BRIEF HISTORY

P3s in Haiti have had mixed results, and thus the skepticism that greeted the announcement of a proposed P3 to replace the failing Teleco was not unfounded. Beginning in the late 1990s, the first Préval administration instituted a number of P3s as a means of reviving the declining Haitian economy. While some joint ventures were successful, others, like the reopening of cement manufacturing facility, Ciment d'Haiti were not; ten years after partnership, the facility was still not producing its own cement.

Upon his return to the presidency in 2006, Préval again turned to P3s to stimulate the Haitian economy and rid the government of mismanaged enterprises. The administration sought partners for second generation partnerships using both the older model of bringing in a private investor that manages the operation while the government maintains an equity position on the company and a new model, in which the GoH has a contractual agreement to purchase products and services from the private entity that owns, builds, and operates the enterprise. In this round, the Préval administration targeted the national water distribution company, the national electricity company, and Teleco, the national telecom company. The national water distribution company, SESAM, and the national electricity company, E-Power, have been largely regarded as successful P3s that have increased access to utilities and improved the economic outlook.

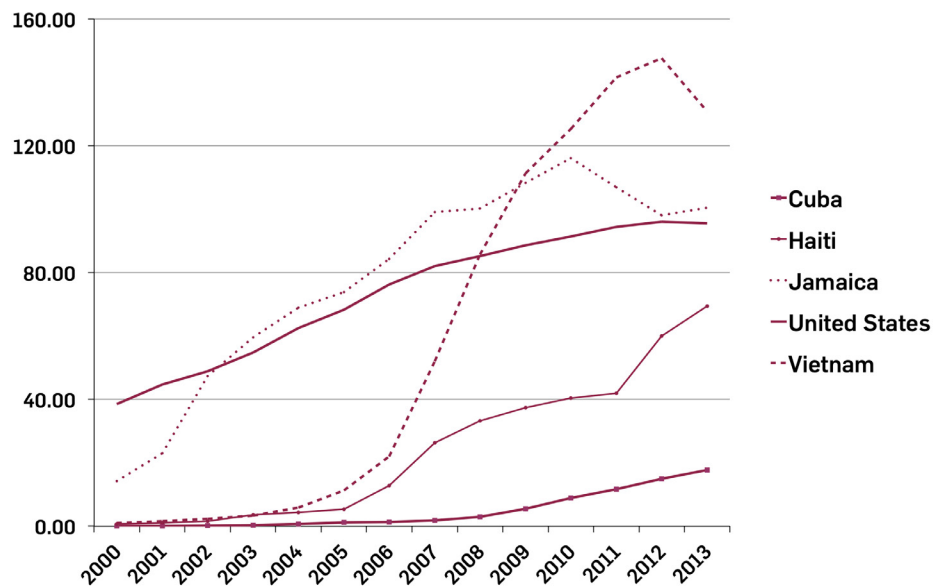
■ THE PATHWAY TO THE TELECOMMUNICATIONS P3

Teleco was founded in 1968 as a state-sanctioned, but privately held telecommunications company in Haiti – a *de facto* monopoly. The primary purpose of Teleco was to provide landline service across the entire country. In October of 1977, the GoH assumed control of Teleco through a decree that granted a monopoly on telecommunications to the state. However, the state remained free to grant concessions or operating licenses to third parties.¹⁷

By 1995, Teleco had not expanded fixed line telecommunications much beyond Port-au-Prince. According to the New York Times, there were just 66,000 telephone lines in all of Haiti¹⁸, a small percentage given Haiti's population of 7.8 million people. With the number of landlines seeming to decrease each year, Haiti had one of the lowest penetration rates in the Caribbean, despite having the second largest population in the basin. The situation had not improved by 1998, and according to some sources, seemed to have worsened. At that point, Teleco's penetration rate was only 0.72 percent - 55,000 landlines for a population of 7.65 million- and 85 percent of that was concentrated in Port-au-Prince.¹⁹ By 1996 it had become clear to both the GoH under President Préval and

the IFC that deep reform of Teleco, if not a fundamental restructuring, needed to take place.

Teleco sought to modernize its services, and in 1998 launched its first mobile telephone service with Rectel, a private Haitian company, with an investment of \$1.8 million. Teleco owned 55 percent of the shares, while Rectel owned 45 percent. Other telecommunications companies entered the market around the same time: in March 1999, Haiti Telecommunications International, S.A., or Haitel²⁰, entered the mobile market, followed six months later by Comcel, a subsidiary of U.S.-based Trilogy International Partners. Perhaps because of the incorporation of all these operations at once, Teleco²¹ did not make much headway in the market opportunities, and Comcel quickly became the leader in mobile telephony.



Comparative Mobile-Cellular Telephone Subscriptions per 100 Inhabitants²²

CORRUPTION

Haiti Teleco was viewed as one of the most corrupt parts of the government.²³ Corruption existed at multiple levels of the organization: workers bribed customers to restore fixed line service that had been 'interrupted'; sycophants used patronage and cronyism to obtain jobs; and high level officials took advantage of their position to syphon off funds through shell companies, especially through schemes involving international calls. As the sole fixed network operator, Teleco enabled people associated with it to engage in rent seeking behavior.²⁴ Minor shareholders hid their identities, thus creating mechanisms for substantial corruption.²⁵

One significant source of corruption within Teleco and the BRH was the syphoning of money collected as part of the tariff on incoming international telephone calls. Responsible for the organization that controlled the only international gateway, Teleco officials were in a unique position to steal funds using a variety of techniques, including the creation of shell companies, located primarily in the U.S.²⁶ In November 2005, GoH filed a lawsuit under the Racketeer Influenced and Corrupt Organizations Act (RICO) in the U.S. against former Haitian President Jean-Bertrand Aristide and several alleged collaborators, though the suit was withdrawn in 2006 because it was too expensive.²⁷

Since then, the U.S. government charged former Teleco officials with money laundering and convicted and extradited several former top Teleco and BRH officials. Haiti Teleco cases in the U.S. resulted in jail terms totaling 42 years²⁸ for the former Haitian officials and their American co-conspirators. The primary individual still at large is “Official B”, who is widely speculated in the media to be former president Aristide.

A GIANT ENTERS THE MOBILE MARKET

Two thousand and five was a turning point for the telecommunications sector in Haiti – one that exposed Teleco as a weak competitor in the telecommunications market. In 2005 Comcel, under the brand name Voilà, changed its telecommunications platform from TDMA technology to GSM, and as a result increased its share of the mobile market. By this time there were 500,000 mobile phone subscribers in Haiti, outnumbering landline by three to one,²⁹ and the vast majority of these were Voilà subscribers. However, the picture changed radically the next year; from May 2006 to 2007, mobile phone coverage rate in the country increased from 6 to 30 percent, as a new player, Digicel, entered the Haitian market and adopted an aggressive subscriber procurement strategy.³⁰ After one year of operations, Digicel grew from zero to 1.4 million subscribers.³¹ A distant third, Teleco could not gain ground in this new world of the mobile market, which had a penetration rate of 46 percent of the population. Fixed telephony, the primary realm of Teleco, lagged far behind with penetration rates of only 10 percent of the urban population and 5 percent of the rural population. Public-sector customers such as schools, hospitals, and emergency providers were among the worst served with only 5,000 fixed lines between them. There were also only 109,000 Internet connections for a national population of nearly 10 million, and many of those connections were stuck in the dark ages of dial up. There was no fiber optic national backbone to support greater Internet connectivity, and there was access to only one submarine fiber optic cable to support international connection.³² Both of these conditions limited commercial growth, which requires the ability to send a high volume of data.

Hurricane Noel in September 2008 added to Teleco's woes as it destroyed portions of its landline service. The more nimble and better-financed private mobile companies were able to restore service more quickly, a scenario that would be repeated on a larger scale after the devastating earthquake in January 2010.

By 2010, the Préval administration found itself unable to expand its fixed landline service. Teleco was limited in international communications by a single submarine cable, hampered by a reputation for poor service and corruption, and bleeding cash. The administration finally decided it was time to transform Teleco into a functioning telecommunications entity.

THE BID FOR A GOH PARTNER

Transformation through privatization of Teleco was controversial. The return of President Préval in 2006 brought some political capital to transform Teleco, but the director of Commission for the Modernization of Public Enterprises (CMEP), Yves Bastian, struggled to convince a skeptical public of the need to modernize a failing public enterprise.³³ In 2007, the GoH engaged the IFC to bring about the modernization. This resulted in a plan to create a P3 that drastically changed the nature of state-sponsored telecommunications in Haiti.

In September 2008, the BRH, through the IFC, issued an Information Memorandum, inviting private sector companies and consortia of private sector companies to participate in an international tender procedure for the

selection of a private investor.³⁴ The outcome of the tender would be the incorporation of a new company that would assume the responsibility for providing telecommunication services throughout Haiti. The new company would acquire the existing non-real estate assets of Teleco and be granted a telecom concession with associated frequencies. This would in theory allow it to provide nationwide telecom services to residential, business, and public customers in Haiti, including increased fixed-line telephony, increased mobile telephony, and wholesale and increased retail broadband (XDSL, WiMax, and fiber optic submarine cables).³⁵

In return for winning the concession, the private investor had to acquire 60 percent of the new company through a capital increase intended to finance capital expenditures and the purchase of Teleco's equipment and human resource assets. The investor partner also had to rehabilitate, expand, and maintain a nationwide telecom infrastructure under the terms of the concession. The intention was for the new company to build a 3,000 km fiber optic cable network to deliver Internet access to rural areas and to open a second submarine access point to improve the country's global connectivity.³⁶ Potential bidders could be telecom operators or financial investors in consortium with a telecom operator. The primary selection criteria were:

- qualifications in terms of telecom experience and financial strength;
- technical offer as articulated in a business plan that included investment commitments; and
- financial offer consisting in the value proposed for the acquisition of a 60 percent stake in Teleco.³⁷

A year later, the bidding process began. At the beginning of the bidding process in August 2009, 32 companies from 20 countries showed interest; of these, 6 expressed serious interest. Only three companies submitted bids by the deadline: Trilogy International Partners, the parent company of Comcel's Voilà; the Digicel Group; and the Viettel Group³⁸, an entirely new organization to Haiti and the Western Hemisphere that had never operated outside of Southeast Asia.

The IFC ran the vetting process on behalf of the BRH. In addition to the World Bank, the IFC brought in a number of specialized consultants to aid in the selection of a new operator. Three of the consultants were from the international arena: the Insulated Cable Engineers Association (ICEA), an association that sets international cable standards; an international auditor, Mazars; an international legal consultant, Gide Loyrette Nouel; and a human resources consultant, IDEA. Matching the international consultants were Haitian consultants: a Haitian auditor, Cabinet Merovee-Pierre; and a Haitian legal consultant, Cabinet Pasquet, Gousse & Associates. On December 29, 2009, the CMEP announced that Viettel was the sole bidder qualified for the tender.^{39,40}

In the midst of what can best be called a highly sensitive negotiation process with Viettel⁴¹, Haiti suffered a devastating earthquake on January 12, 2010, grinding the nation to a near halt. Among the loss of human life and the destruction of homes and businesses, the Teleco networks suffered significant damage, especially fixed-line telephony. The new P3's mandate, to improve the country's connectivity, rebuild the telecommunications

Many of the consultants that assisted with the bid to create a new P3 were brought in from outside Haiti and the Haitian government. Keep this in mind as you read about Natcom and note insights. What were the benefits and risks of using consultants that were not primarily Haitian? How might have this affected Natcom's success?

infrastructure, and increase access to fixed line, mobile, and high-speed Internet services, instantly became a key component of the government's long-term recovery strategy. The stakes for a successful partnership rose even higher.

■ THE NEW P3 AND THE NEW TELECOMMUNICATIONS LANDSCAPE

In May 2010, IFC confirmed that the newly incorporated P3 would be named Natcom and would possess licenses and frequencies for a full range of telecom services. The GoH facilitated the takeover by releasing 2,800 employees from their positions at Teleco in April.⁴² The layoff resulted in a brief strike later that month, but work resumed quickly under the new Vietnamese management. The impending takeover also led to some isolated acts of sabotage, but Natcom was able to repair the compromised lines quickly.

Natcom entered the Haitian telecommunications scene at a time when it was dominated by two mobile carriers: Comcel's Voilà brand and Digicel, who had taken over as the largest mobile operator in Haiti by the end of 2006. Digicel further consolidated its lead in the mobile market in March 2012 when it bought Voilà from its parent company, U.S.-based Trilogy International Partners. Digicel completely absorbed Voilà by October 2012, bringing its number of customers to 3.5 million.⁴³ At the end of 2012, Natcom only had 5 percent of the mobile market, while Digicel dominated the market with 89 percent of subscribers and an aggressive plan to further expand its market share.

STATE TELECOM BUSINESS STABILITY

Since its inauguration in 2011, the Natcom P3 between BRH and Viettel has brought much needed stability to the state telecom business. Viettel's purchase of 60 percent of the assets curbed the hemorrhaging of cash from BRH. Further, the process of privatization has rid the state telecom business of visible corruption. In preparation for the P3, the BRH removed much of the top leadership of Teleco. Additionally, Teleco's board released two-thirds of Teleco's employees, a workforce perceived by the public as inefficient and corrupt, much like it perceived the company's leadership. Finally, while at first there was negative media coverage regarding terminated employees, it appears that Natcom's improvements in service and products have helped the company overcome this initial negative publicity.

GREATER COUNTRYWIDE COVERAGE

One of the objectives of the Natcom P3 was for the private partner to construct a second submarine cable to provide critically needed international connectivity. While Natcom may have eventually accomplished this task, in 2012 Digicel took building the second submarine cable into its own hands, announcing plans to build a \$16 million, 200 kilometer undersea cable. Digicel undertook the effort in conjunction with Columbus Networks, the leading undersea fiber-optic cable network provider in the Caribbean.⁴⁴ Thus, while the end result was a second cable, Natcom was not responsible for its construction.

Natcom claims to have expanded service to the public sector, the most underserved telecom market in Haiti. Natcom says it provides Internet service to many government buildings, hospitals, and schools. Natcom also

claims to have created a fiber optic network between the president's office and some provincial towns. Finally, Natcom claims to have vastly improved the emergency communications network between first responders. That effort is most welcome in a nation as prone to hurricanes and earthquakes as Haiti. However, due to lack of transparency, it is difficult to confirm Natcom's statements about service expansion.

DEEPER MOBILE PENETRATION

While Digicel's 2006 entry into Haiti increased market penetration, the launch of Natcom in 2011 improved penetration even more. This increase was due to Natcom's successful marketing campaigns and its lower and more flexible pricing structure. While Natcom did not erode Digicel's market share to a large extent, it expanded the market and tapped into the populace's high demand for telecommunications in a country with only 55,000 fixed line telephones.

IN-COUNTRY INTERCONNECTIVITY AND PORTABILITY

Voilà's absorption by Digicel left only two mobile operators in Haiti: the newly formed Natcom and the multi-national Digicel. The lack of interconnectivity between the carriers had been a chronic problem since 1998 when mobile telephony first emerged in Haiti. Mobile subscribers using one operator could not call mobile subscribers using any other of the existing carriers. Now, with only Natcom and Digicel left standing, the GoH, through CMEP, negotiated in 2011 an interconnection agreement between the two companies. This greatly enhanced telecommunications across the country, as customers could now call customers of the other mobile service.

Do you think there were benefits to the P3 structure of Natcom? What do you think the counterfactual- staying a government entity- would have looked like? What would the benefits and drawbacks have been to full privatization of Teleco?

In addition, CMEP negotiated with Natcom and Digicel to sign a portability agreement allowing customers to switch service providers without losing their phone number. In a country plagued by poor communications, the seemingly small act strengthened communications within the country and promoted much needed competition between the two carriers.

MORE COMPETITIVE PRICES THROUGH DIVERSIFICATION OF PRODUCTS AND SERVICES

The emergence of Natcom resulted in diversification of products and services offered to Haitians, which reduced the prices of service plans. In order to better serve lower income customers in Haiti, mobile operators had to offer a range of less expensive handsets and a variety of plans, both pre- and post-paid. Digicel entered the mobile market in Haiti fully aware of this necessity. Natcom was less prepared to do this when it entered the market in 2011, but quickly realized that low prices were necessary to compete with Digicel. Natcom was at a disadvantage with a limited array of handsets, but was nimble in the design and pricing of its plans: the company offered highly subsidized handsets and SIM cards to customers along with the plans. The combination of subsidized products, flexible plans, and lower prices opened the mobile market to Haitians who were too poor to

participate in the market before.

In particular, Natcom responded aggressively to Digicel's popular mobile banking platform, TT, with a banking platform of its own, Mobile Internet. As a result, mobile banking became one of the fastest growing sectors in mobile telephony in Haiti. With transportation infrastructure nearly destroyed by hurricanes and the 2010 earthquake, mobile banking is a lifeline for Haitians who cannot access brick and mortar facilities. Mobile banking facilitates transactions both inside the country and remittances from family outside Haiti. By 2012, mobile banking surpassed the five million transaction mark.⁴⁵

■ SHORT-TERM OUTCOMES OF THE P3

The creation of a new P3 telecom entity has enhanced the overall state of telecommunications in Haiti. The BRH is no longer using its cash resources to prop up a financially untenable Teleco, and the partnership has allowed CONATEL to pay closer attention to needed regulatory reform. In addition, the entry of Natcom into the mobile market spurred the other remaining mobile operator, Digicel, to increase its efforts to broaden its presence resulting in deeper mobile penetration and greater countrywide coverage. Furthermore, the competition between Natcom and Digicel has enhanced consumer services considerably, especially in the area of interconnectivity and number portability between providers. Increased competition has also led to the diversification of products, services, and plans to reach a larger number of potential customers and to a more competitive pricing structure. The introduction of mobile banking and the competition between mobile providers has facilitated economic activity. Finally, Natcom's desire to bite into Digicel's large market share has led it to initiate several corporate social responsibility practices in response to Digicel's extensive philanthropic program in Haiti.

■ LONG-TERM QUESTIONS REGARDING NATCOM

While Natcom is a far more efficient organization than Teleco ever was, there are several remaining questions regarding the organization's current operations, future sustainability, and social and economic impact.

First, there are questions regarding the financial transparency and management style of Viettel. There is anecdotal evidence that Viettel has been less than forthcoming with financial data and independent audits. While Viettel's technical expertise is highly valued, there are allegations of ineffective management styles and a lack of understanding of competitive market forces and customer satisfaction.

What do you think are the implications of the financial transparency and management style of Natcom's partner organization, Viettel, especially with regards to the success of the P3?

A lack of transparency also surrounds Natcom's daily operations. It is unclear whether Natcom actually fulfilled its contractual obligations within the timeframe originally allocated by the tender. Natcom's progress is ambiguous in three areas: 1) the construction of a fiber optic backbone for the transmission of large data and high definition video; 2) the rehabilitation and expansion of fixed line telephony; and 3) the development of a WiMax (or

equivalent) wireless network. There is no information from credible outside sources regarding Natcom's progress in these areas.

Second, there is the question as to whether the David and Goliath scenario of Natcom's small market share of mobile users is sustainable - Digicel maintains overwhelming dominance of the mobile market at 89 percent. Natcom has responded to this scenario with a generally lower, and thus more competitive pricing structure for its mobile users, and therefore may be able to make inroads into Digicel's customer base.

However, Digicel has the support of a large corporate presence in the Caribbean Basin and can draw on this infrastructure to aggressively take advantage of market opportunities. Complicating the situation for Natcom was Digicel's 2012 announcement that it had an agreement with Columbus Networks to build a 200 km submarine cable⁴⁶ to connect Haiti to 21 countries in the region and the United States. In addition, it is rumored that another mobile internet operator in the region will soon be moving into the Haitian market by expanding its microwave radio network and will offer serious competition.

Third, P3s are often formed instead of fully privatizing a public entity so that the government partner can ensure that there are social and economic benefits to operation. Natcom has alleviated the tax burden of supporting a cash-hemorrhaging Teleco and has offered lower cost plans, but both benefits could likely have been achieved through privatization. Additional benefits of the structure are unclear, particularly regarding the employment of Haitians. Imported labor may have crowded out local labor. Reports say that Viettel brought in Vietnamese and Cuban engineers in 2010 and 2011 to undertake repairs due to destruction from the earthquake in 2010. Accordingly, the number of Haitians currently in the engineering ranks may be low. While Natcom as a whole employs several hundred Haitians, it is unknown how many of those are in technical or professional ranks. There is no information on programs Natcom might have in place for workforce development, or details on pay scale. Furthermore, Natcom may not be making enough effort towards increasing youth employment. There is no indication of Natcom or Digicel conducting outreach to Haitian universities for training and/or internships.

Natcom's willingness and ability to address these questions is unclear. Despite the significant improvement in telecommunications in Haiti, there is a considerable need to overhaul the telecommunications regulatory framework to respond meaningfully to a multi-player market and evolving technology. A specific reform that is often mentioned in trade articles is the need to reform CONETEL's legal framework, as they do not have the means by which to auction bandwidth. This is one of the key missing 'links' in telecom sector, and the question remains as to whether the legislature has the political will to pass the needed reforms. Without these reforms, Natcom's current situation (i.e. market share, management practices, social benefits, etc.) is unlikely to change.

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