**Analyzing the role of the PPP in the development of the Vietnamese Telecoms market**

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**Abstract**

Private sector facilitation and financing of telecom infrastructure has always been touted as the best way of developing telecom infrastructure. This ideology reflects in the design of Public Private Partnerships. This idea is not practiced in every part of the world. In Vietnam PPPs are designed to facilitate Public-owned infrastructure. The market outcome in Vietnam negates the belief that private sector financing for infrastructure development is best practice. Using the Principal Agency theory, PPP in Vietnam is analyzed to understand the role of each segment in the facilitation of fixed-line telephony, mobile telephony, broadband telephony and fixed-line telephony. The outcome of the research indicates that the Vietnamese approach was innovative and not sustainable. Hence, PPPs favoring he private sector is proposed.

**Introduction**

This paper examines the roles of the public and private sector in facilitating telecommunication Public Private Partnerships (PPP) in Vietnam. PPP in this paper is defined as the cooperation, collaboration or partnership between the public and private sector to facilitate infrastructure (telecommunication) delivery (Williams & Falch, 2014; Iossa & Martimort, 2015). The telecom reforms of the 1980s till date is based on the belief that telecom infrastructure delivery is better handled by the private sector (Melody, 2013). The public sector provides the enabling environment and supports to aid the private sector fulfil the Public sector’s Universal Service initiatives. Hence PPPs in facilitating telecom infrastructure development has been designed to enable favorable return of investment for the private sector. Examples include PPPs for facilitating Next Generation Networks (NGNs) in Singapore and Japan (Yardley, 2012; Kushida, 2013).

However, in Vietnam PPPs are designed to favor the state. This form of PPP is called Business Cooperation Contracts (BCC) by the Vietnamese (CIER, 2011; Tuan, 2011). According to the Vietnamese Investment Law (2005) BCC is a form of investment signed between investors for business cooperation with profit-sharing or product-sharing, without creating a legal entity[[1]](#footnote-1). Nevertheless, in telecom sector BCCs are mainly made between public patners (the state-owned entity) with foreign patners (USAID, 2005). Under a BCC, the foreign partner expands the existing infrastructure, and financing while the state-owned entity provides the service. However, the foreign partner does not have an equity claim in the assets and any managerial control on the project. The management structure is shared as well as the revenue accrued (CIER, 2011). Though the private sector is involved in this form of PPP, the private sector has no stake in the market. The Private sector in this paper does not include private individuals with shares in a state-owned joint stock company. Rather the private sector here are foreign and local non-public network operator. In Vietnam, these private network operators are foreign. This arrangement is an antithesis of common PPP practices. However, what is more curious is the level of mobile telephony penetration in Vietnam, under this PPP regime. The mobile penetration rate stands at 137% (Ministry of Information and Communications, 2014). The mobile and fixed Broadband rate seem to grow at a steady rate. In Vietnam, the government controls the telecom infrastructure as well as own the telecom companies via various government agencies.

Can it be said, that the Vietnamese government has proven to the world that PPPs designed to favor the public sector is the best way of public investment into telecom infrastructure? Or are PPPs designed to facilitate private led telecoms market still the best way out? To facilitate this research, the fundamentals of the Principal Agency theory was utilized to understand who has always been the principal in the Vietnamese market and who has been the agent. This approach was chosen because each BCC contract was unique. It was safer to use this approach than to assume that the public sector was always the principal in Vietnam. This is because Vietnam ratified the world trade organization (WTO) agreement and signed a Bilateral trade agreement (IBA, 2008; Lee, 2011). The aim of this agreement was to enable more private sector participation in the Vietnamese economy. Vietnam has facilitated more reforms since ratifying international agreements. Hence there was the expectation that the principal agency role in some specific BCCs could be the other way round. However, based on this framework, the roles of the public sector and the private sector in the facilitation of the infrastructure was studied. The Vietnamese telecoms market was divided into the fixed line telephony, mobile telephony, mobile broadband and the fixed broadband market for the purpose of analysis.

Based on the findings from each market, one can see which segment dominates BCC arrangements. Here, we assume that if the findings show a successful market delivery, judged by the subscription rate, and if the BCCs control more than 50% of the market, then it will be judged that the BCC works. If a BCC cannot be found, then a trace will be made into previous years to understand, when the BCCs ended and if it has an impact on the present day market. In instances where the BCCs were successful, if the BCC favored the public sector, it will be adjudged that the Vietnamese PPPs have successfully challenged the notion that PPPs should be privately driven. If the alternative is the case, then it will be stated that privately driven PPPs should be encouraged in Vietnam.

**Principal Agency relationships in PPPs**

Public Private Partnerships are often designed to achieve common goals. Both parties share risk, capital and incentives accrued from the project (Worldbank, 2014). However PPPs do not denote symmetric relationships. They are asymmetric in nature. The reason for this is because of the need to provide leverage for different sectoral goals in the bid to achieve common goals. The public sector intends to achieve Universal Service Policy objectives, while the Private sector aims a earning a reasonable Return on Investment (ROI). These goals only converge if every part of a country is commercially viable, else these are divergent national goals. However, for PPPs to survive in the asymmetric relationships, there has to be a barter contract aimed at forging a common bond between the public and the private sector entity via leveraging.

The existence of the asymmetry in the PPP relationship exposes the principal agency relationship in PPPs. One party leads the way and the others follow based on interest. The asymmetry can be identified in different models of PPPs such as concessions and joint ventures. In joint ventures, the Public sector determines the terms of the partnership. It then seeks partners that will be suitable for them to fulfil their objectives. Hence the public sector can be identified as the principal. There is, however, a fine line here. This is because the private sector can become the principal, if they are awarded the higher equity, the infrastructure ownership, management control and the opportunity to take over the telecoms entity at the end of the Joint venture agreement. In concessions, the concessionaire (be it Public or Private) is granted the right to facilitate a certain telecom infrastructure or service for the public or private sector (Mayer, 1996). The commercial and regulatory risk was initially borne by the sector. However, in recent times, the public sector bears the commercial risk as well. This they do by bearing the supply risk by providing partial investment into the project (due to a huge amount of money needed to invest in broadband projects). They also share the demand risk by investing to create demand via e-government, e-commerce, e-education,.. initiatives (due to the lower purchasing power).

In the late 1970s to the early 1990s, the wave of privatization championed by Ronald Raegan and Margeret Thatcher evolved into concessions of public infrastructure financing to the private sector (Hearne, 2009). National monopolies providing fixed-line telephony were the incumbents. Mobile network operators were new in the market, providing different standards of 2G mobile telephony. However, the national monopolies were the target of the concession agreements. Examples include Business Cooporation Contracts in Vietnam and telecom infrastructure concession in Lebanon at the end of the Lebanese civil war (Williams, 2015). Concessions also existed Pre-1979. Examples of concessions in fixed line telephony include telecom concessions in France, Italy and Norway (Agic & Grove, 2015). In such concessions, the Public sector delegates the private sector to expand, manage and invest into the Public telecom infrastructure for a fixed period of time. Both parties share revenue under various arrangements. The public sector is the principal as they delegate the private sector in a concession contract to facilitate public infrastructure (Iossa & Martimort, 2015). The private sector owns nothing at the end of the contract, as they performed the work of the Public sector on their behalf (Hearne, 2009). Examples of such concessions are the Build Operate Transfer (BOT) and Design Build Operate (DBO) contracts (Williams & Falch, 2014).

The full privatization of national monopolies and the liberalization of the fixed and mobile telephony markets opened new doors to PPPs. The call for private sector investment in the telecommunication sector was to avert the existing market failures in most jurisdiction and to facilitate an effective and competitive market. However, the impact of the 2008 financial crises on the telecom companies and the public sectors desire to promote broadband meant, new PPP measures had to be adopted to facilitate telecom infrastructure delivery (Feijoo, Gomez-Barroso, & Bohlin, 2011). However, the telecom infrastructure and services in the West and part of the global south (sub-Saharan Africa, South America and some Asian countries) were now controlled by the private sector. The ratification of the WTO agreements that led to this market structure meant public intervention was only needed to facilitate the market and not to run the market (Melody, 2013). The public sector now found itself as an agent, rather than the principal. The public sector had to create a conducive atmosphere for the market to thrive. The public’s Universal Service interest was now secondary as the private sector had to be convinced before it could embark on telecom infrastructure expansion or upgrade. Hence the public sector had to look for a way of achieving its interest as an agent, rather than being the principal. These changing roles has resulted in new forms of PPPs.

In the EU the public sector is now financing the extension of private infrastructure expansion via Private DBOs. The private sector is not obliged to accept the funding if itself interest is not protected and expected risks taken care of. In this case it is because they own the infrastructure and they have other plans toward infrastructure expansion. This divergence of interest and the pressure for countries to be seen as investment hubs relegates the public sector to becoming an agent to telecom infrastructure development rather being the principal. However, the public sector is taking bold steps in coming the principal via PPPs by developing public Broadband and Next Generatio infrastructure, by which the private sector can lease. These are identified as a Public DBO form of PPPs (Yardley, 2012).

Hence, as the telecommunications markets evolve towards Broadband and Next Generation Networks (NGNs), so will the principal agency status of both sectors change. The striking thought is that as the telecommunications world evolve in the principal agency relationships in PPPs, Some Asian countries such as China and Vietnam still adopt the public sector driven telecoms market. This is also reflected in the way these countries arrange PPPs in the telecom sector. In Vietnam, competition is facilitated by Public entities. These public entities have at one time or the other adopted PPPs. How did these PPPs fit into the socialist regime? What principal-agency roles did the public sector and the private sector play in these arragements? Is there any lesson that can be drawn from Vietnam if any? This is the discussion in the remaining section of the paper.

**Vietnamese telecom market and PPPs**

Public Private Partnerships in Vietnam as mentioned earlier have been arranged in the form of Business Cooperation Contracts (BCC) and joint ventures as mentioned earlier. In this section, overview of the Vietnamese telecom market is presented. Subsequently, the organizational arrangement, financial arrangement of BCC and joint venture in the fixed-line telephony, mobile telephony, mobile broadband and fixed line telephony is discussed.

**Overview of the Vietnamese telecom market:** Vietnam is one major emerging market in ASEAN countries. Its population in 2014 reached about 90 million people, ranked 3rd in ASEAN (after Indonesia and the Philippines) and 14th in the world[[2]](#footnote-2). Having reformed telecom sector since the 1990s, Vietnam has made significant achievements and ranked 10th in Asia in terms of the volume of the internet users in 2012 (MIC, 2013).

In the reformation’s initial stage, Vietnam had less than 1 million fixed line subscribers and only 23,500 mobile phone connections in 1995. The tele density was 0.4 percentage (USAID, 2005). The market prior to 1995 was dominated by the monopoly state-owned-company (VNPT) and no competition and competitor took place at that time. VNPT was responsible for providing all postal and telecom services. The monopoly of VNPT was ended in 1995 as two new entrants were licensed to provide telecom services were Viettel and SPT. The year of 1997 witnessed an important milestone of the telecom market when Vietnam officially connected to the international internet network (Kelly & Mingers, 2002). The late connection was due to the hesitation of the government. They were afraid of the influence of viewpoints outside that might differ with their perspective (Kelly & Mingers, 2002). In this year, the government also granted five internet service providers licences (VNPT, Viettel, SPT, FPT, and Netnam) to deliver internet services (Dung, 2012). In which all of them were the state owned companies, and a few years later SPT, FPT, and Netnam have become joint stock companies that private partner could invest in them. In 2001, ETC (then renamed EVN), a state owned company belonging to the Vietnam Electricity Corporation, was licensed to provide all telecom services (fixed local, domestic and international long distance, leased line, mobile and VOIP services). The penetration of ETC into the telecom market was expected to facilitate competition in Vietnam, due to some ETC’s advantages such as financial potential, the nationwide electricity network, and applying new technology to deliver services. In this year, Viettel and SPT were also licensed to deliver VOIP services.

With regard to mobile telephony market. Prior to 2003, the Vietnam mobile telephony market was dominated by Vinaphone and Mobifone (both of two companies are subsidiaries of VNPT, in which Mobifone was a cooperation between VNPT with Comvik, Sweden via BCC). Although Viettel, SPT, and ETC was previously licensed, they had not delivered mobile telephony services yet. The penetration rate of mobile telephony in 2002 was 2.3 percent (USAID, 2005). In 2004, after a period of time to trial Viettel and SPT (its mobile telephony brand name was S-phone under a BCC between SPT and SK telecom, South Korea) officially launched fixed wireless service. Like Vinaphone and Mobifone, Viettel used GSM 900/1800 technology. However, SPT used CDMA technology with the expectation of delivering high quality services comparing to those apply GSM. In 2005, HT Mobile (a BCC between Hanoi Telecom, Vietnam and Hutchison Telecom, HongKong) started providing mobile telephony services by CDMA 2000 technology. ETC also commenced providing services in 2006 using CDMA technology. And in 2008, Beeline (a BCC between Gtel, Vietnam with Vimpelcom, Russia) entered the market by GSM technology. Till 2010, Vietnam had seven mobile service providers (Mobifone, Vinaphone, Viettel, ETC, SPT, HT Mobile, and Beeline). By opening telecom market to some extent, Vietnam has made remarkable achievements in terms of the penetration rate of mobile telephony. The growth rate of mobile phone was really impressive despite the low base starting point. The growth rates were 238.3%, 166.3%, 31.2, and 13.6% in 2007, 2008, 2009, and 2010 respectively (MIC, 2009; MIC, 2010; MIC 2011). And in 2013, the penetration rate was 137.93% (MIC, 2014). However, due to the overcrowding in the mobile telephony market that has resulted in intense competition between these telecom providers. They usually introduced promotional programs to attract new users and draw customers from rivals rather than focusing on improving the quality of services or providing new services. As a result, their ARPU was increasingly declined, the mobile ARPU in 2008 reached US$6, lower than that in 2007 and 2006 were US$6.5 and US$7 respectively (Business Monitor Internation, 2011). Table 1 demonstrates the penetration rate of the telecom market over period 2009-2013

**Table 1: The penetration rate of the Vietnam telecommunications market**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Year | Fixed telephone | Mobile telephone | Fixed Broadband Internet | Mobile Broadband Internet |
| 2009 | 20.12% (17,427,365) | 113.40% (98,223,980) | 3.71% (3,214,584) | 8.10% (7,029,368) |
| 2010 | 16.45% (14,374,438) | 127.70% (111,570,201) | 4.20% (3,669,321) | 8.80% (7,669,544) |
| 2011 | 11.52% (10,174,849) | 144,19 % (127,318,045) | 4.33% (3,828,388) | 18.1% (16,014,991) |
| 2012 | 10.72% (9,556,089) | 148.33% (131,673,724) | 5.35% (4,775,368) | 17.2% (15,327,826) |
| 2013 | 7.50% (6,725,329) | 137.93% (123,735,557) | 5.74% (5,152,576) | 19.2% (17,214,781) |

Source (MIC, 2011; MIC , 2012; MIC, 2013; MIC, 2010; MIC, 2009)

**BCC in fixed line telephony development**: BCCs were used extensively in the facilitation of fixed-line telephony by the incumbent VNPT. Table 2 provides an outlook to BCC contracts in the development of fixed-line telephony. The BCCs were between the national gateway and incumbent telecom network VNPT and foreign partners. In these contracts, the foreign partners provided financial and human resources to facilitate the development and the expansion of VNPT’s infrastructure, while VNPT provided the services. As part of the BCC contract, the foreign partner also trained the VNPT personnel. In order to enable the private sector recoup the OPEX and CAPEX of the foreign partner at the end of the BCC contract, VNPT shared the revenue accrued with the private sector. VNPT’s contribution to the BCC was their asset, including their infrastructure. However, in few cases, VNPT did co-finance BCCs. An example is the BCC contract between VNPT and Sapura SND – BHD Malaysia (Toulmin & Smith, 2006). Here VNPT committed US$1,615,000 to the project.

**Table 2: BCCs in the Vietnam fixed line market**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No** | **Partner and rate of capital investment** | | **Areas of cooperation** | **Type of cooperation/company** | **Private sector investment ($US Million)** | **Time\*** |
| **Public** | **Private** |
| 1 | VNPT (31%) | Telstra-Australia (69%) | Constructing and running international telecom network and services | BCC | 237 | 12 years (1988-2000) |
| 2 | VNPT (30%) | Voice International-Australia (70%) | Development and exploitation of paging services in Hochiminh city | BCC | 0.73 |  |
| 3 | VNPT (38%) | Sapura SDN-BHD Malaysia (62%) | Constructing and running the public card phone services in Ho Chi Minh city | BCC | 5.2 | 8 years (1993-2001) |
| 4 | VNPT (42%) | Worldcorp Holding-Singapore (58%) | Development and exploitation of telephone directories | BCC | 0.38 | 5 years (1995-2000) |
|  | VNPT (25%) | Korea Telecom-South Korea (75%) | Constructing network in Haiphong, Haiduong, Hungyen, and Quangninh provinces | BCC | 53 | 10 years (1996-2006) |
| 6 | VNPT | Nippon Telegraph and Telephone-Japan | Constructing network in Northeast of Hanoi | BCC | 194 | 15 years (1997-2013) |
| 7 | VNPT (0%) | France Telecom-France (100%) | Constructing internal network in the east of Ho Chi Minh city | BCC | 467 | 15 years (1997-2012) |
| 8 | VNPT (0%) | Cable & Wireless-UK (100%) | Constructing telephone network in the east of Hanoi city | BCC | 207 | 15 years (1997-2012) |

\* Time that licenses were granted

Source (Nguyen, Le, & Tran, 2005; USAID, 2005)

It could be said that, BCCs played a critical role on infrastructure development in Vietnam. If compared to VNPT’s revenue and investment capital were 15.5 billion US and 4.3 billion US in period 2006-2010 (Thu, 2012), we can see BCCs accounted for a big part of VNPT’s total investment.

Some BCCs in the provision of fixed line telephony did not succeed. This was due to the inability of both public and private parties to agree on how the revenue will be shared. An example is the botched BCC between Cable and wireless and VNPT in 1999 (Telecom Paper, 1999). However, the advantage of the BCCs, one would say, is that the Vietnamese Government were able to harness capital to expand, both national and municipality backhaul and last mile infrastructure respectively.

**BCC in the mobile telephony and mobile Broadband development:** In the mobile market, fewer BCCs can be sighted. The decline of BCCs in the mobile market occurred over time. More BCCs existed at the point of transition from fixed-line telephony to mobile telephony. The continuation of BCCs is based on the fact that Vietnam, telecommunications is seen as a strategic national asset due to national security issues (Law on Telecommunications, 2009). Hence the Government of Vietnam has devised a means of creating competition and at the same time controlling the telecommunications sector using BCCs. The general structure of BCCs, though unique for each case, was being extended to the delivery of mobile telecom services as seen in the table below.

**Table 3: Players in Vietnam mobile phone market**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Partner** | | **Areas of cooperation** | **Type of cooperation/company** | **Time** |
| **Public** | **Private** |
| 1 | VNPT (53%) | Comvik-Sweden (47%) | Constructing and running the national mobile phone network and services | BCC (turned into state owned company and controlled by VNPT in 2005) | 10 years (1995-2005) |
| 3 | SPT | SK Telecom-South Korea  LG Electronics | Constructing and running the national mobile phone network and services | BCC since 2003, and turned into joint stock in 2011 (now SPT holds more than 80% stake) | 2003 |
| 4 | Hanoi Telecom | Hutchison Telecom-Hong Kong | Constructing and running the national mobile phone network and services | BCC | 15 years (2005-2020) |
| 5 | Gtel Mobile | VinpelCom-Russia | Constructing and running the national mobile phone network and services | Joint venture (turned into 100% state owned company in 2012) | 2008 |

\* Time that licenses were granted

Source (USAID, 2005)

But unlike the fixed line telephony market, the BCCs, as a result of the greater public sector gain advantage was not sustainable in the mobile telecom market for the smaller players. In the delivery of fixed line telephony, foreign companies only engaged with VNPT. VNPT engaged in BCCs to facilitate fixed-line telephone infrastructure from the International gateway to reasonable last miles. Hence BCCs were segmented for the facilitation of different levels of the national telecoms infrastructure. In the mobile market, VNPT has a successful BCC partnership with Comvik/Kinnevik of Sweden as seen in the table above. They (VNPT) had previous experience with BCCs. Secondly, they controlled the mobile market via their subsidiaries (Vinaphone and Mobifone) and they deployed GSM. Hence BCCs worked for them. But for smaller public telecom companies such as Hanoi Telecoms, SPT and GTel, they had a smaller mobile market share and they were new to the market. Aside SPT and Hanoi Telecoms opted to deploy a new technology - CDMA. SPT and Hanoi Telecoms are regional joint stock public companies. Gtel is a joint stock company, affiliated with the ministry of public security (Minh, 2011). These smaller companies did embark on BCCs, as well, as a means of gaining private capital and expertise.

However, problems emerged along the way with the BCCs. The BCC between SPT and SKT South Korea ended after 10 years (2001-2010). The high cost of CDMA customer premise equipment, low subscriber base and the inability to compete with the GSM providers (McCormick, 2010). Hence SKT had to pull out of the BCC. GTel and VimpelCom of Russia also ended their BCC after three years (2008-2012) for not making any profit (Oanh, 2012). The BCC between Hanoi telecoms and Hutchison telecommunications survived because in 2008, 4 years after the BCC contract was signed, they converted their CDMA network to a GSM network. Most importantly, one cannot write off the fact that the revenue sharing between the two partners are 50:50 ( (Hutchison Telecom, 2005). The GTel BCC, though they also provide GSM, failed because they arrived in the market in 2009 when it was saturated. Hanoi telecoms provide regional coverage, hence their potential market compared to GTel (who attempted National coverage) was smaller. Currently, SPT and GTel are struggling to survive (Vietnam News, 2013). Based on this fact, BCCs in the provision of mobile telephony was not so successful. Most companies wriggled out of BCCs, due to the inability of foreign investors to receive long-term value for their investment, high transaction costs, the risk of earning short-term investment due to technology neutrality aiding the entrance of innovative mobile technologies and the inability to own a telecom license (USAID, 2005; CIER, 2011). The state owned company owns the license in BCCs. SKT South Korea opted for a joint venture with SPT (Tuoi Tre, 2011). Hutchison at the moment has declared intentions to convert the BCC into a joint venture to enable their flexibility in management due to a heavy financial commitment to the partnership (TeleGeography, 2011).

BCCs declined in the facilitation of Mobile Broadband as only 1 BCC was left when the 3G license was auctioned in 2009. This was the BCC between Hanoi Telecom and the Hutchison. However, as Hutchison had no legal right to getting a license via the BCC, Hanoi Telecom had to partner another public telecom company EVN to bid for the 3G license.

**BCC in the facilitation of fixed-broadband development**: In the fixed broadband market, no BCC exists. The fixed-broadband market is dominated by public owned telecom companies.

**Joint Ventures**: As mentioned earlier, Private sector operators in Vietnam desire Joint ventures. The majority of the joint ventures as seen in table 2 are what one might call “Public-Public Partnerships”. Aside VNPT, Viettel, EVN, and SCTV that are pure state owned companies, the other telecom companies except FPT are joint stock company arrangements between different players (private and public investors). Joint ventures are permitted in the Vietnamese telecoms sector based on the telecommunications law. However, the Vietnamese government has approved more BCCs than joint ventures. Very few companies have been able to convert to from BCCs to joint ventures as a result of the slow pace of the public sector company in negotiating with the private partner. However, recent interests from Comvik Sweden and Telenor Group from Norway in Vietnam has been towards going into a joint venture with Mobifone, a former subsidiary of VNPT (TeleGeography, 2014). But the interests are geared towards VNPT subsidiaries and Viettel. Interest in small companies is rare, due to their small market share (Vietnam News, 2013).

**Implications of the Public Agency and market development in Vietnam**

In the Vietnamese market, it is clear that the Principal is the Public sector and the agent is the private sector. The Vietnamese government via various agencies own the telecom infrastructure and the services. The private sector, on the other hand, owns nothing. They are just delegates of the public sector. They are compensated by revenue sharing. The interests of the private sector are considered minimal to that of the public sector. The risk accrued to the private sector is heavier than the risk borne by the public sector. This as mentioned earlier resulted in botched BCC contracts. These BCC contracts looked attractive in the facilitation of fixed-line telephony because no one could foresee the upgrade of mobile telephony standards as disruptive to the fixed network market.

Hence, the Vietnamese Government was able to harness private capital via BCCs to facilitate VNPT’s (the incumbent’s) infrastructure. This provided VNPT with the edge to compete with new public sector entrants. By the time the mobile market had kicked off, smaller companies that embarked on BCCs had to compete with a giant (VNPT). As the BCCs involved huge capital from the private sector, they had greater revenue loss than the public sector partner. The decline of the number of BCCs from the year 2010 can also the rate of Broadband infrastructure development and subscription is slow in Vietnam as in the table above. If the financial structure of the BCC was better arranged to favor private investment in mobile Broadband markets, the problems experienced with BCCs would have been solved. This would have resulted to having more players in the Broadband market, leading to a more rapid subscription rate.

What is striking about the Vietnamese case is that aside the decline of fixed line telephony, for obvious technological and market reasons, the Mobile telephony, mobile broadband and Fixed broadband market has been growing steadily since 2009 despite the decline of the number of BCCs in private investment. This can be seen in the table above. However, this data, though revealing, is not the product of a competitive market as such, rather it is an oligopoly. VNPT and Viettel control approximately 98% of the fixed-line market (VNPT (76.5%), Viettel (21.51%)). Both companies and their subsidiaries control approximately 93% of the mobile market (VNPT (49.23%), Viettel (43.48%)). Both companies also control approximately 97% of the mobile Broadband market and approximately 68% of the fixed-broadband market (MIC, 2013).The other mobile telecom companies own from less than zero to about 10% share of the various markets. This is a problem.

Vietnam’s approach to having the public sector as the principal and the private sector as the agent in their PPPs towards telecom infrastructure development looks interesting at first sight. It negates the popular belief that private sector led PPPs are more efficient than public sector led PPPs (Savas, 2000; Grimsey & Lewis, 2002; Iossa & Martimort, 2015). If one places the Vietnamese approach with their market outcomes, at first sight, it also negates the same popular belief based on the global economic climate. One cannot but say that they are doing very well. But the stall in the development of Broadband infrastructure and the near collapse of most of the public telecom companies (such as SPT and Gtel), seem to validate the need for private sector investment in the Vietnam telecommunications market. Broadband infrastructure is capital intensive and public sector driven PPPs such as the Vietnamese BCC should be replaced with private sector driven PPPs. So far, the Vietnamese Government has taken steps to break the dominance of VNPT by restructuring it. Mobifone, one of the subsidiaries of VNPT has been decoupled from the company (Vietnam News, 2014). There are plans to equitise Mobifone (Vietnam News, 2015). But more is needed to aid Broadband infrastructure development.

The advantages of a dynamic shift in principal-agency relationship in PPPs can be seen in the regions such as the EU, and countries such as, Singapore, Japan in South American countries like Brazil (See (Williams, 2015; Kushida, 2013; Yardley, 2012; Falch & Henten, 2010)). In these jurisdictions, PPPs in the telecommunications sector are designed to facilitate an efficient and sustainable Broadband market. Hence the incentives to engage in PPPs in the telecommunications sector is hinged on shared commercial and regulatory risks. In the EU, different levels of governments, such as the Swedish municipalities do not only invest in PPPs, they facilitate demand to create traffic for the infrastructure (Lindskog & Johansson, 2005; Williams, 2015). Still in the EU, the most countries such as the Netherlands encourage innovative infrastructure delivery bottom-up procedures using PPPs and opennet facility sharing arrangements. However, to encourage efficiency and sustainability, a private sector entity ends up owning the infrastructure.

Hence Vietnam needs to think of an innovative way, they could arrange PPPs to favor Private sector investment. The concession form of PPPs may not be the best way out. This is because concessions restrict the private sector in the type of infrastructure and services delivered. Concessions can also restrict technological advancement as new entrants may be held at bay as an obsolete technology is being deployed. To avoid these risks, PPPs in Vietnam should be designed to grant to provide long term asset value for the private sector.

**Conclusion**

This paper began with the fascination on the telecommunications infrastructure delivery in Vietnam. This was because the market was public driven and private sector participation was enabled by a restricted form of PPP called the Business Cooperation Contracts (BCC). This engagement between both sectors of the economy resulted in an impressive mobile telephony market delivery. This led one to wonder, if a public interest dominated PPP could lead to such a high mobile telephony penetration. However, what was also clear was the BCCs did contribute to the high mobile telephony penetration rate. Unfortunately, that was short lived. A careful look at the four markets revealed that the markets were an oligopoly and competition was being threatened due to reduced private sector funding and the mistrust for the BCCs. As a result of these factors, among others, the BCCs failed eventually. Hence, based on the findings, one would say that the public driven PPP could in some circumstances. But it is not sustainable on the long-run.

Hence this paper proposes a change in PPP approach from a public interest driven PPP to a private interest PPP. Though the Vietnamese form of PPP seems to be an antithesis of current forms of PPPs, it was innovative and it was an interesting way of harnessing private capital. However, at the end of the day Vietnam needs to more to reform its market to attract private investment, if the huge capital needed for Broadband delivery is to be raised.

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2. Available at <https://en.wikipedia.org/wiki/Vietnam> [↑](#footnote-ref-2)