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Examining actors into boosting the provision of universal service in the Vietnamese context

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Abstract:

Purpose - *The paper looks at the formulation of the BMGF-VN project to examine which actors participated in the formulation of this project, how their interests were translated into this project, and what lessons may be drawn for the formulation and implementation of universal service policy in Vietnam in general.*

Design/methodology/approach - *The paper recruits the actor network theory and qualitative analysis to analyse the BMGF-VN project.*

Findings - *the involvement of non-government actors in formulating and implementing the project, the focus not only on the supply side but also demand side are very important in formulating and implementing universal service policy.*

Originality/value - *There have been a few studies applying actor network theory in analysing the formulation of policy, especially in universal service. The paper wants to close this gap.*

Keywords *Stakeholders, actor-network theory, universal service, telecommunications, Vietnam*

Paper type *Research paper/case study*

1. Introduction

Since signing the Bilateral Trade Agreement with the United States in 2002 and joining in the WTO in 2005, Vietnam has radically changed in the provision of universal service. Vietnam eliminated the cross-subsidy regime that was mandated to VNPT, the incumbent operator to deliver universal service. Subsequently, Vietnam in 2005 established Vietnam public telecommunication service Fund (VTF), an entity belonging to the Ministry of Information and Communications Vietnam (MIC), to collect financial contribution of telecom providers as well as subsidise providing universal service. Since 2005, Vietnam has introduced two programs on the provision of universal service. The first program was launched in 2006, the so called ‘Program on the provision of public telecommunications service till 2010’ (the Program 74). The Program 74 was implemented from 2005 - 2010. In 2011, the second program on provision of universal services was already approved by the Prime Minister and would have been deployed in a five-year-interval, from 2011 to 2015 (Decision 1643, 2011). However, this program was postponed and reformulated. On July 24th, 2015, the Prime Minister issued another second program, namely ‘the program on the provision of public telecommunications services until 2020’ (the Program 1168). The program 1168 has been divided into five-

part plans and focused much on subsidising infrastructure roll-out. It is implemented till 2020.

After some years of deploying the two programs, Vietnam achieved remarkably successes. However, it has also revealed many issues in formulating and implementing the two programs on provision of universal service (the program 74 and 1168), such as:

- The top-down approach, not based on a market-oriented mechanism, adopted by Vietnam led to the gap between the services subsidised and the rural users' demand(Thai, Falch, & Williams, 2016);
- The interactions between the central government and provincial governments as well as provincial governments and telecom providers were not streamlined and relatively loose(Thai, Falch, & Williams, 2015);
- The lack of the participation of civil society and private sector (Thai, Falch, & Williams, 2016);
- Both programs focus much on the supply side and neglect the demand side, such as: the improvement of the knowledge and ICT skills of users or the development of applications in education, agriculture, and health information in local languages (both two programs do not have any budget for initiatives regarding training, education, or support for universities/research institutes researching on rural users' demand, services, etc.) (Thai, Falch, & Salakpi, 2016).

In Vietnam, there was another universal service project tagged 'Improving ability of using computers and public internet access in Vietnam' (the BMGF-VN project) initiated by the Bill and Melinda Gates Foundation (BMGF), a Non-Governmental Organization. The BMGF-VN is mostly funded by BMGF to the tune of 33.6 million USD. The rest of budget came from MIC, VNPT, Viettel, and provincial governments (16.9 million USD). The main objective was to improve competence and the way of providing information of Public Libraries (PLs) and Cultural Post Offices (CPOs) at 40/63 provinces to assist rural users, the poor and vulnerable population to access information. Distinguished from the two programs funded by the central government, the BMGF-VN project not only focused on providing PLs and CPOs facilities (e.g. computers, printers, cameras, and software), but also focused on: training activities; communicating and advertising the program via public media and events to improve the knowledge and skill of internet users as well as attract rural inhabitants to come to PLs and CPOs; and annually carrying out an impact assessment of the training, communicating activities, and rural users' ICT needs to adjust the program to fit their needs. After six years (2011-2017), the BMGF-VN project distributed 12,670 desktop computers, 1,900 printers, 1,900 IP-cameras, and other equipment to 400 provincial/district libraries, 500 commune libraries, and 1,000 CPOs. They also held up 5,811 events for 288,500 participants, produced 1,811 bulletins/news via public medias, and provided training courses for 14,718 participants (librarians at provincial/district/commune libraries, and staff at CPOs). Especially, the BMGF-VN project mobilized the participation of various non-government actors (civil society and private actors) in deploying the program. The BMGF-VN project made a big contribution to the social and economic development at provinces/locales it funded. It is illustrated via the amount of time using computer and connecting to the internet, the number of participants accessing PLs and CPOs, and the desire of staff of PLs and CPOs to run their own activities (by their own budget) to attract more users. The significant success of the BMGF-VN project lead to this research. In this paper, we attempt to seek the answer of the questions:

1. *What motivations and relationships between actors in formulating and implementing the BMGF-VN project?*
2. *What lessons should be recommended to Vietnam to solve these issues as well as enhance the provision of universal service?*

To answer the questions, the paper applies actor network theory to analyse the project 'Improving ability of using computers and public internet access in Vietnam' (the BMGF-VN project) in the context of boosting the development of ICT in countryside in Vietnam. By analysing the BMGF-VN project under actor-network theory, the paper tries to show the motivations and relationships between actors who formulated and implemented this project. In other words, actor network theory helps to investigate how actors (both human and non-human actors) aligned their interest into a social and technological arrangement or artefact. Based on these findings from the analysis, recommendations will be provided for Vietnam in terms of who should be involved in the formulation and implementation of universal service policy.

The concept of universal service is distinct across countries. It is likely that each country creates their own definition in line with its social, economic, and technological development. According to the ITU, universal service has three fundamental characteristics: availability, accessibility, and affordability. The main target of universal service is to ensure individual accessibility to basic telecommunications services regardless of geography, gender, ethnicity, disabilities or other factors. In this paper, the term of universal service used is based on the Vietnamese government's view. Universal service in Vietnam (or the so-called public telecommunications service) included universal and mandatory telecommunications service. In which, the universal telecommunications service was standard telephone service and standard Internet access service; the mandatory telecommunications service was emergency calls.

The paper is structured as follows: Section 2 presents the theoretical framework and research method, section 3 analyses the BMGF-VN project, section 4 are discussion and preliminary conclusions.

2. Theoretical framework and research method

2.1 Theoretical framework

Actor-Network Theory (ANT) was developed by Michel Callon and Bruno Latour (Walsham, 1997). It provides a framework to explain the process of technology adoption (McBride, 2003). Walsham (1997) points out that ANT examines the motivations and actions of actors within the social - technical network. Actors here are not just humans (people or organizations) but also non-humans (software, computer and communications hardware, and infrastructure standards) (Walsham, 1997). Actor-network can be technical or social arrangements where actors' interests are translated into a network (Monteiro & Hanseth, 1996). According to Walsham (1997) 'successful networks of aligned interests are created through the enrolment of a sufficient body of allies, and the translation of their interests so that they are willing to participate in particular ways of thinking and acting which maintain the network'.

In ANT, 'translation' and 'inscription' are of key concepts for understanding process of aligning interests of actors to form an actor network Walsham (1997). Translation implies that actors align interests of other actors with their own into a network. An inscription is the result of the translation of one's interest into material form (Callon, 1991). In general, any component of the heterogeneous network of skills, practices, artefacts, institutional

arrangements, texts and contracts establishing a social order may be the material for inscriptions (Monteiro & Hanseth, 1996).

ANT has been widely used to analyse the process of technology implementation. However, a few researchers have analysed the formulation and implementation of ICT policies under an ANT lens (Gao, 2005; Shin, 2010; Shin & Lee, 2011). To analyse the formulation and implementation of strategies for the development of telecommunication market in China, Gao (2005) designs a research framework (Figure 1). In this framework, he considers the telecommunication market as a non-human actor and defines the public and society, the state, and the operators as the groups of human-actors representing the social interests in the telecommunication area. His analysis shows that how actors translated and inscribed their interests into the strategy formulation for the development of telecommunication market in China. He also posits that it is important to take contextual analysis into account to capture the strength and flexibility of actors' interests and their power to influence an inscription.

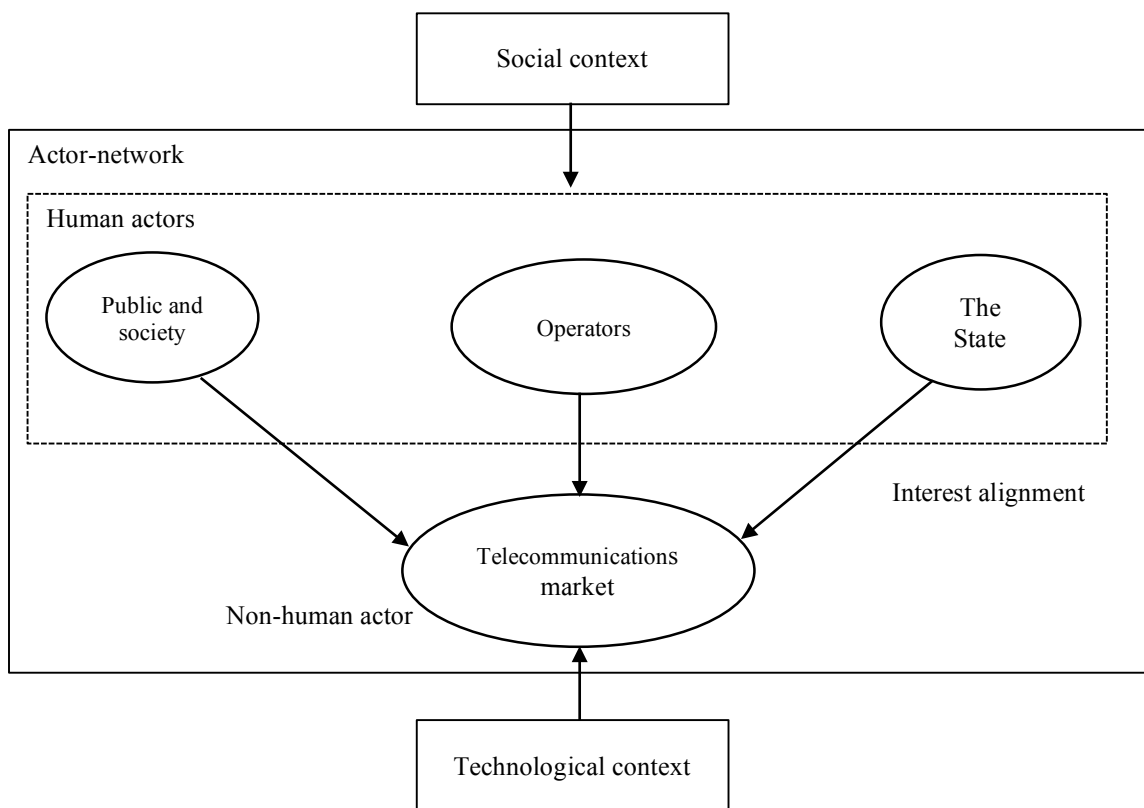


Figure 1: Framework of actor network analysis (Gao, 2005)

Shin & Lee (2011) base on the ANT framework of (Gao, 2005) to analyse the Korea's strategy for the development of the ubiquitous city (u-city). The findings show that the Korean government should consider not only non-human actors or technological factors, but also human actors or social/cultural issues in the process of constructing social-practice infrastructure. In other words, they argue that the clear understanding of how networked applications and scientific inquiry have been transformed by pervasive

infrastructure is also indispensable. Shin (2010) employs ANT to analyse policy-making process of the convergence in terms of politics and regulation, and examines how actors' interests are aligned and coordinated in the policymaking process of convergence in Korea. He shows that the actor-network around convergence is not effectively stabilized, as the politics of convergence is complex and marked by paradoxical features. Hence, he suggests the Korean government should create a friendly regulatory environment to the growth, development, and collaboration of actors across all spectrums, including technology, infrastructure, and content.

2.2 Research method and data collection

The paper applies the actor network analysis framework of Gao (2005) to look at the BMGF-VN to investigate motivations and relationships between human actors and non-human actors in formulation and implementation the BMGF-VN project in the context of boosting the development of ICT in countryside in Vietnam. Based on these findings from the analysis, recommendations will be provided for Vietnam in terms of who should be involved in the formulation and implementation of universal service policy.

According to Walsham (1997), non-human actors are technological artefacts. Gao (2005) argues that an 'artefact' is 'a fact created by human beings and usually refers to a technological design in literature' and he considers telecommunication markets as the non-human actor. In this paper, we consider universal service as a non-human actor. Human actors are people or organizations who stand in or speak for particular interests (Walsham, 1997). In his research, Gao (2005) defines the public, the state, and the operators are human actors representing the interests of the telecommunication market in China. In our paper, we define public and society, the state, Bill and Melinda Gates Foundation, telecom providers, VNPost (Vietnam post company) are human actors. And eventually, an actor network is a network of various interests of actors translated and inscribed into them. In this paper, the actor network is the BMGF-VN project (Figure 2).

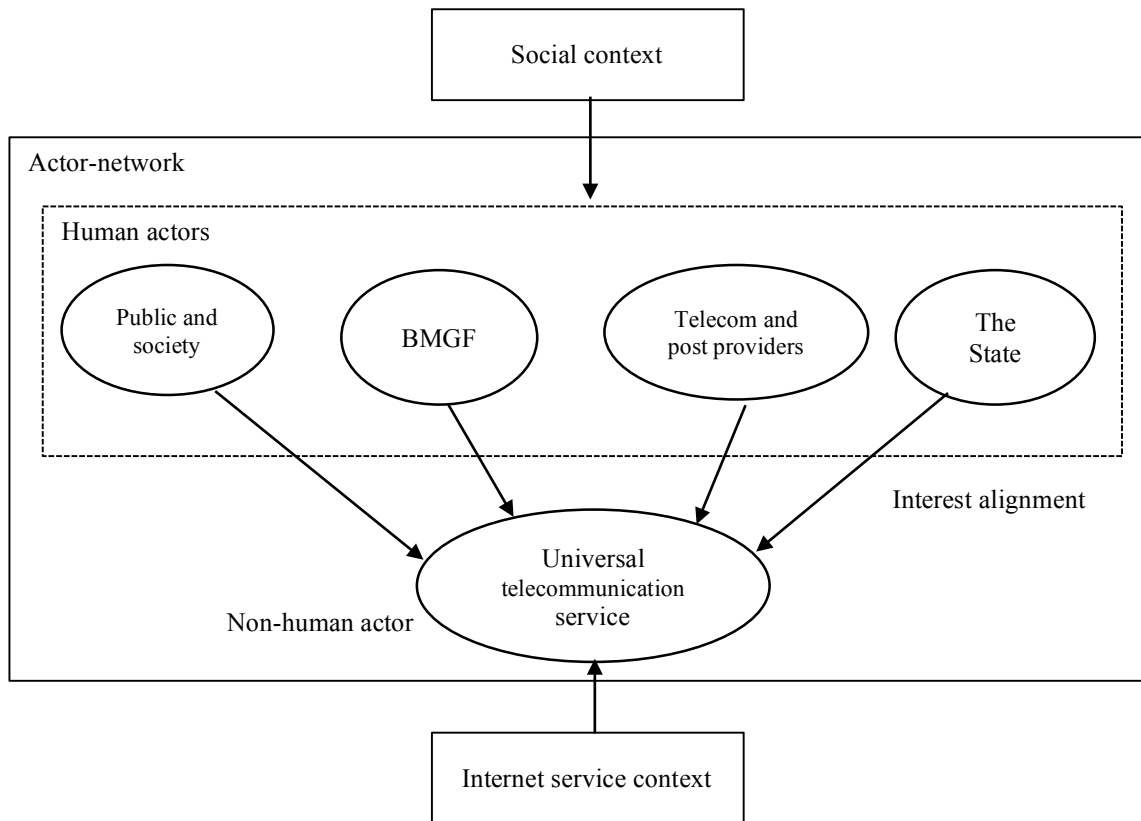


Figure 2: Actor network analysis in universal service in Vietnam

This is a qualitative research. The study is based on the case study conducted in Vietnam. The qualitative method is recruited to analyse some documents, such as telecommunication regulations, the Telecommunications Law, reports from the Management Unit of the BMGF-VN, data on webpages, and some from ITU and the World Bank. Documentary analysis is appropriate for the examination of public and private documents, and “enables a researcher to obtain the language and words of participants at a convenient time” (Creswell, 2009). To supplement the analysis, a structure interview using ANT was performed. The respondents were Vietnam government officers (MIC and Department of Information and Communications-DIC), the Director of Management Unit of the BMGF-VN project, members of social organizations, staff working on public libraries and public telecom centres. The data was transcribed and analyses used narrative analysis.

3. Analysis

3.1 *The interests of Actors*

Furthering the development of ICT in general and enhancing the provision of universal service in rural areas in particular is one of critical missions of the Vietnam government. Within 04 months, since September of 2010 to January of 2011, the Vietnamese introduced two key projects in terms of development od ICT. In 2010, the Prime Minister issued the Project ‘Fastening Vietnam to become an advanced nation in ICT’ (Decision no 1755/QD-TTg), and in 2011 he issued another project regarding rural areas ‘Boosting the development of ICT in countryside in Vietnam’ (Decision no 119/QD-TTg).

Distinguished from universal service programs which rooted from such kind of these projects and delivered universal service to rural users, this project (issued by Decision 119) directed policymakers/regulators (MIC and Ministry of Agriculture), provincial governments, and state own enterprises (telecom providers, VNPost) to build up programs to deploy this project. The main objectives of this project were enhancing ICT infrastructure build-out in countryside to promote the development of economy, reduce the poverty, and improve knowledge of rural dwellers. To fulfil these objectives, the central government presented 6 groups of tasks, such as: enhance the provision of universal service; roll out broadband network to communes; improve the efficiency of the culture post offices and pilot community information centres; build up a special television channel on countryside; develop a model for delivering public administration services via internet; improve ability of computer usage and public internet access. They also called for mobilizing other resources (outside state budget) to build out ICT infrastructure.

Meanwhile, according to a survey on rural internet access and usage in Vietnam rural areas conducted by Long (2010, p.66-69) showed that 67% rural people used internet several time or frequently, almost all of them expected to use internet at least once per week. However, among persons who ever used the Internet, the percentage of using the Internet at public centres was very high (at community centres: 34.5%; at office: 32.8%; and at Internet café: 27.6%). One of the reasons that lead to the high percentage of the Internet use at community centres was that at community centre, the price of Internet access has been reduced compared to other types, then, rural dweller preferred to go there to use the Internet service. Contrary to this data, 91% of people did not have internet at home, only around 13% people had PC. In this survey data, it also revealed the applications that rural people used the most as they were online, such as entertainments and news were 65% and 71%, respectively; chatting and email were around 50%; and health, education, and agriculture were 41%, 33%, and 22% respectively. Apparently, we can see that rural dwellers or public and society in rural areas had high demand for using the internet. They needed connection to the internet for their entertainment, chatting, and searching information for education, health, and farming. However, they did not have internet and PC at home. They usually accessed to the internet at public internet centres (due to the affordability). These interests were also appropriate to those of the state as they wanted to promote the development of economy and society, reduce the poverty, facilitate the application of ICT.

In 2007, Bill and Melinda Gates Foundation (BMGF)¹ worked with Ministry of Culture, Sports, and Tourism (MCST) to find out the library system in Vietnam and want to provide a grant for improvement of ability of using computers at public libraries in Vietnam². However, according to the Director of Management Unit of BMGF-VN project 'Because MCST did not meet BMGF's requirements in terms of financial ability and the sustainability of the project, they looked for another partner'. And BMGF were instructed to work with MIC and Vietnam Public telecommunication service Funs (VTF) who could satisfy their requirement. The Director said that 'As working with BMGF, I propose them to subsidise for the CPOs. Because the CPOs comply with their conditions and moreover VTF could be their partner to deploy the pilot project³'. The CPO network

¹ BMGF is a non-government organization set up by the billionaire Bill Gate and his wife.

² MCST governs whole the libraries network in Vietnam.

³ Before being a director of the Management Unit of the BMGF-VN project, he was a vice director of VTF. VTF is an entity belonging to MIC. Its main function is to subsidise the provision of universal service.

has function like libraries delivering newspaper, books, and internet connection. Nevertheless, it does not have much books as libraries, and belonged to VNPT (now VNPost)⁴, a state-owned telecom provider governed by MIC. This grant was fit to the BMGF's goal that is transforming public libraries as community information centres via access to the internet as well as training courses on how to make full use of the internet and computer⁵. This grant was part of the Global Libraries program.

The BMGF's first grant was around 2.15 million USD⁶ to run a pilot project within 18 months (later extended more six months). The pilot project aimed at equipping PCs and delivering training courses to staff of 99 CPOs and PLs at 3 provinces in Vietnam. The pilot project also coordinated with the PLs and CPOs to organize events for local dwellers about benefit of the internet. The result of this pilot project would be a critical condition to decision whether to expand this pilot project or not. After 18 months, this pilot project achieved successful and was awarded Best International Award for the "Best Rural Administration Initiative" at the E-world Award Ceremony 2011⁷.

Due to the success of the pilot project, BMGF expanded this project to be more 5 years, 2011-2016 (later extended 1 year to 2017) with another grant of 33.6 million USD. The rest of budget (16.9 million USD) came from MIC, VNPT, Viettel, and provincial governments. The expanded project (the BMGF-VN project) would be deployed at 40/63 provinces in whole nation. Like the pilot project, the BMGF-VN project would provide PLs and CPOs facilities (PCs, printers, and cameras). Besides, as a key condition to receive the grant from BMGF, MIC had to implement four-part programs, such as: training; advertisement; build up a website to provide necessary information to people; and independent project analysis (IPA). They were key parts of this project as well as BMGF's requirements. MIC also had to establish a Project Management Unit to be its representative to deploy activities of the BMGF-VN project.

To deploy the project and comply with commitments to BMGF, MIC had to work with provincial governments in terms of budget that would be contributed into the project. More specifically, these provinces, where the project would implement (40 provinces), would have to pay salary for staff, the electronic, connection to the internet, facilities (tables and chairs) at provincial/district PLs⁸. VNPost would also have to pay the same items as provincial governments, however they paid for CPOs. MIC had to work with telecom providers to reduce the internet subscription fee to 30% or 50% for PLs and CPOs. Basically, to participate in the BMGF-VN project, all actors (MIC, provincial governments, telecom providers, and VNPost) had to make financial contribution into this project⁹. However, it can be said that they also got much benefit from the BMGF-VN project when it would be implemented. PLs and CPOs would receive facilities (PCs and printers) for their libraries, they would be also provided training courses on using computer and the internet. Telecom providers (VNPT and Viettel) would have opportunity to preoccupy the market.

⁴ VNPT, till 2007, set up 8,021 CPOs in entire country (Tuan, World Bank, 2011). This network later has been merged into VNPost.

⁵ <http://www.gatesfoundation.org/What-We-Do/Global-Development/Global-Libraries#OurStrategy> accessed on June 18, 2017.

⁶ The total budget was appropriately 2.2 million USD, in which BMGF granted 2.15 million USD, the rest was contributed by VTF.

⁷ <http://www.gatesfoundation.org/Media-Center/Press-Releases/2011/11/Vietnams-Public-Libraries-Offer-Improved-Access-to-Information-and-Technology>, accessed on June 16, 2017

⁸ Provincial governments are responsible for public libraries at their locale. CPOs belong to VNPost.

⁹ MIC had to contribute 335,000 USD

The last actors participated in the BMGF-VN project were telecom providers (VNPT and Viettel). They had to reduce 50% (VNPT) and 70% (Viettel) of subscription fee of connection to the internet for PLs and CPOs who got grant (PCs and printers) from the BMGF-VN. However, this reduction was fit to their business strategy. VNPT is an incumbent in Vietnam. Before reforming the telecommunication market, they were mandated to provide universal service under the cross-subsidy regime. VNPT till 2007 established a network of 18,941 places (including post offices and CPOs) in entire country (Tuan, 2011). Hence, reducing the internet subscription fee for CPOs would make this network more attractive to rural users. Meanwhile, Viettel entered into the telecommunication market in 2000 by providing the VoIP service. However, today they become the biggest operator in Vietnam in terms of both revenue and market share. By the business strategy ‘countryside besieges the city’, they at the first days focused to develop the market at rural areas. This strategy was very successful and gave them the number one position as now¹⁰. Hence, their strategy was also appropriate to the objectives of the BMGF-VN project.

4. Discussion and preliminary conclusions

Despite of a small project (compared with other universal service programs funded by the government) mainly funded by a NGO, the BMGF-VN project made a big contribution to the social and economic development at these provinces/locales. Distinguished from the two programs funded by the central government (the Program 74 and 1168), the BMGF-VN project not just focused on the supply side, such as providing PLs and CPOs facilities (e.g. computers, printers, cameras, and software), but also focused much on the demand side, such as: training courses; advertising the program via public media and holding events to improve the knowledge and skill of internet users as well as attract rural inhabitants to come to PLs and CPOs; and annually carrying out an independent project analysis (IPA) to evaluate the influence of the training, advertisement activities, and rural users’ ICT needs in order to adjust the program to fit their needs. Especially, the BMGF-VN project mobilized the participation of various non-government actors (Learning Promotion Association or Youth/Women Associations) in deploying the project. These associations encouraged and persuaded rural users to participate in advertisement events and training courses. According to a vice director of DIC in an interview said that ‘members of Learning Promotion Associations¹¹ participate in training courses hold by the BMGF-VN project, and after that they organize other training courses or introduce for rural users about the locations of PLs and CPOs close to them as well as provide rural users knowledge of computer and the internet’. The vice director posited that the role of these associations is critical and make a significant contribution into the spread out of the project. He said that ‘It is a creative way to get as much as involvement of social associations into advertising and promoting the BMGF-VN project’. Besides, the training courses were auctioned and usually updated to fit to rural users and staff of PLs and CPOs. It is also an indispensable factor leading the success of the BMGF-VN project.

In this project, the role of telecom providers (VNPT and Viettel) does not play much. They just reduced the internet subscription fee and set up connection to PLs and CPOs (if these places had not accessed to the internet).

¹⁰ <http://cafef.vn/ong-nguyen-manh-hung-va-nhung-bai-hoc-kinh-doanh-cua-viettel-201402242307459230.chn> accessed on June 15, 2017

¹¹ They are civil associations having function of gathering and promoting people learning. <http://www.hoikhuyenhoc.vn/modules.php?name=News&op=viewst&sid=2280>

After six years (2011-2017), the BMGF-VN project distributed 12,670 desktop computers, 1,900 printers, 1,900 IP-cameras, and other equipment to 400 provincial/district libraries, 500 commune libraries, and 1,000 CPOs. They also held up 5,811 events for 288,500 participants, produced 1,811 bulletins/news via public medias, and provided training courses for 14,718 participants (librarians at provincial/district/commune libraries, and staff at CPOs). It is illustrated via the amount of time using computer and connecting to the internet, the number of participants accessing PLs and CPOs, and the desire of staff of PLs and CPOs to run their own activities (by their own budget) to attract more users.

Based on the positive result of the BMGF-VN project and findings of the analysis, we can see that the involvement of non-government actors in formulating and implementing the project, the focus not only on the supply side but also demand side are very important.

Deriving inspiration from this project, such bottom-up approach could be adopted by the Vietnamese government to enable the demand of broadband adoption. This implies that newer actors with newer competence should be encouraged to be partner in the adoption of broadband in Vietnam. In this way, the existing supply initiatives will match up with the demand needed for the broadband infrastructure.

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