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Do Manh, Thai; Falch, Morten; Williams, Idongesit

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Analysing Universal Services in Vietnam: A Stakeholders' Approach

Thai Do Mahn, Morten Falch, Idongesit Williams



Center for Communication, Media and
Information technologies (CMI), Electronic
Systems, AAU Copenhagen, Denmark



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center for Communication, Media and Information technologies (CMI)

Department of Electronic Systems,

Aalborg University Copenhagen,

A.C. Meyers Vænge 15,

DK-2450 Copenhagen SV

Tel +45 99403661

E-mail cmi@cmi.aau.dk

URL <http://www.cmi.aau.dk>

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ANALYSING UNIVERSAL SERVICES IN VIETNAM: A STAKEHOLDER APPROACH

Thai Do Manh, Morten Falch, Idongesit Williams

*Center for Communications Media and Information Technologies, Aalborg University,
A.C.Meyers Vaenge 15, Frederikskaj 12, 3rd Floor, DK-2450 Copenhagen SV, Denmark*

ABSTRACT

This paper looks at the universal service policy in Vietnam (interval 2005-2010) under stakeholder angle in order to clarify the role and the relations between players who participated in performing this policy. The stakeholder theory is employed to identify and categorize these stakeholders. The authors examine the national government, international organizations, policy intermediaries, companies, and customers/citizens via applying the qualitative method. The qualitative approach of interview on some officials was also conducted. The results demonstrate that the government and telecom providers had a huge impact on the success of the universal service policy.

Keywords: universal services, stakeholders, role.

1. INTRODUCTION

Today information and communications technology (ICT) in general and telecommunications realm in particular plays a vital role on social and economic development of each country. Promoting the application of advances of ICT to build the Information Society as well as to achieve the Millennium Development Goals is one of the critical missions that the International Telecommunication Union has suggested nations to carry out (WSIS, 2003).

In past years, there has been profound research on universal services, especially concentrating on study of the role of government/policy (Falch, 2007; Fan, 2005; Frieden, 2005; Gillett, Lehr, & Osorio, 2004; Gillwald, 2005; Hammond IV, 2005; Kalra & Borgohain, 2004; C. Lee & Chan-Olmsted, 2004; H. Lee, O'Keefe, & Yun, 2003; Picot & Wernick, 2007; Samarajiva, 2000), or the models/tools furthering the penetration of universal services (Falch & Anyimadu, 2003; Falch & Henten, 2010; Peha, 1999). However, there have been few studies on stakeholders with regard to implementing universal services, particularly in developing countries.

This paper examines the role of stakeholders on carrying out universal service policy in order to identify their impact and their position on

performing the policy (interval 2005-2010) with Vietnam as a case study.

The paper attempts to answer the following questions:

1. How did stakeholders play role on implementing the first universal telecommunications services program (2005-2010)?
2. Which implications will be recommended to the government?

The paper employs the stakeholder theory to recognise and categorize stakeholders who took part in deploying the universal service policy in Vietnam. Based on qualitative method, the authors analyse the secondary documents and conduct interviews directing on some officials working for Ministry of Information and Communications, Departments of Information and Communications (located at provinces), local telecom providers and Vietnam Public Utility Telecommunications Service Fund.

The paper is structured as follows: Section 2 presents theoretical framework and research methods, section 3 highlights the telecommunications market in Vietnam; section 4 analyses key stakeholders, section 5 provides discusses and conclusions, some recommendations are also given.

2. THEORETICAL FRAMEWORK AND RESEARCH METHODS

2.1. Theoretical Framework

Stakeholder theory and perspectives has evolved from the business ethics field to help managers consider and incorporate principles and values of a number of constituencies (Zhang et al., 2005). Recently, the theory has also been applied more prevailing in ICT sector, especially in e-government (Luk, 2009). As Scott et al (2004) argue that the primary purpose of stakeholder analysis is that identification of multiple, possibly conflicting stakeholder groups will serve to benefit the development and implementation of an information system. Studying attitudes and expectations of multiple stakeholders will increase the rate of acceptance and improve the quality of collaboration by removing or accounting for areas of conflict

(Scott et al., 2004). Likewise, Papazafeiropoulou & Pouloudi (2000) note that identification and involvement of the widest players might reduce conflict and increase the rate of success in information system implementation. Hence, the application of the theory as a tool to identify and to analyse the impact of stakeholders in ICT field is useful.

According to Freeman (1984), stakeholder is "any group or individual who can affect or is affected by the achievement of the organization's objectives". Applying this theory, Papazafeiropoulou & Pouloudi (2000) recognize five groups of stakeholders in the electronic commerce market: 'the national government', 'International organizations', 'Policy intermediaries', 'Companies', and 'Customers/citizens'. Furthermore, they also design a web of stakeholders that demonstrates the relations among these stakeholders via national strategies.

Figure 1: The web of stakeholders (Papazafeiropoulou & Pouloudi, 2000)

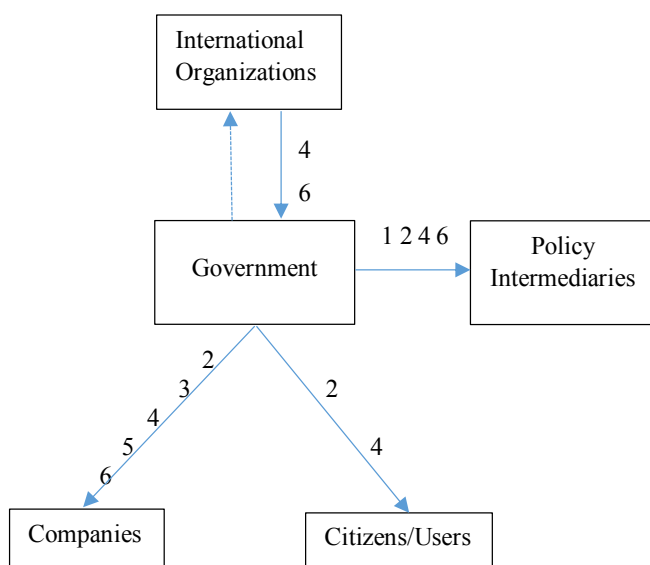


Figure 1 depicts the relations between groups of stakeholders via six types of national strategy. In which, (1) 'Knowledge building' and (2) 'Knowledge deployment' refer to financial support

for research and development, and diffusion of innovations to individuals and organizations; (3) 'Subsidy' is financial support for actors involved in the electronic commerce innovation; (4) 'Mobilization' encourages individuals and organizations to perceive the potential benefit of innovations and use them; (5) 'Innovation directives' are norms that regulate the production or usage of innovation; (6) 'Standard setting' as a form of regulation aims at constraining options of organizations (Papazafeiropoulou & Pouloudi, 2000). The figures in the web present six types of national strategy that stakeholders can apply them to impact other stakeholders. This paper applies this frameworks to analyse the role of these stakeholders as well as to demonstrate the relations between them in deployment of universal service policy in Vietnam. This framework has been used by some scholars to do research about the development of the Korean broadband and mobile broadcasting market (Choudrie et al., 2003; Shin et al., 2006). Apparently, the stakeholder theory has been increasingly gained attention of researchers (Scott et al., 2004). The application of the theory as a tool for identification and analysis the impact of stakeholders has become more prevalent, not only in business but also in ICT field.

Another approach to analyse the impact of actors on telecommunications market is based on the actor network theory. Gao (2005) recruits actor network theory to examine the strategy formulation for telecommunications market reform in China and implies that identification and consideration of the interests of different stakeholders in the strategy formulation is crucial. In telecommunications development the public and society, the operators, and the state align their interests with the process. Hence, the government must consider technological requirements as well as the specific economic and political environment, and the situation of the market and infrastructure development.

2.2. Research methods

To identify stakeholders the paper is applying the stakeholder framework of Papazafeiropoulou & Pouloudi (2000). Additionally, this research also employs the qualitative method to clarify the stakeholders' impact and position on performing the universal services policy. Almost all data was mainly collected from the Vietnamese Ministry of

Information and Communications (MIC), the Vietnam Public Utility Telecommunications Service Fund (VTF), and some incumbent providers. However, some data was gathered from speciality newspapers as well. Furthermore, to verify and triangulate the result of the secondary data, eight officials were interviewed, in which two officials from MIC, one of them is a former director of VTF; two local government officials; two officials from VTF; and two telecom providers' managers. These interviews were carried out face to face and lasted from one to two hours. Almost all of these interviews were recorded and made note in order to ensure validity and reliability of the data.

The definition of universal services is very distinct across countries. Hence, in this paper the term of universal services is based on the Vietnamese government's view. In 2006, universal services in Vietnam was defined as the public telecommunications services including: universal and mandatory telecommunications services. In which, the universal telecommunications services were standard telephone services and standard Internet access services; the mandatory services were emergency calls. The targeted subjects of this policy were individuals and households living in communes having the tele-density under 2.5 lines per 100 inhabitants (Decision 74)¹.

In this paper, stakeholders were analysed in the period of 2005 - 2010, because at that time the Vietnamese government was deploying the first Program on provision of public telecommunications services until 2010. The following years the

provision of universal services has been delayed. Recently, the government just issued the second program - the Program on provision of public telecommunications services until 2020 (Decision 1168 dated on July 24th, 2015).

3. OVERVIEW OF TELECOMMUNICATIONS MARKET IN VIETNAM

Like other developing countries, Vietnam has reformed and liberalized its telecommunications market since 1994 (Dung, 2012) as it separated the regulatory and business function from the Department General of Post and Telecommunications - DGPT (a governmental body, predecessor of MIC today). Consequently, DGPT was only responsible for making telecommunications and post policy, and regulation. Vietnam Posts and Telecommunications Corporation (VNPT), a state-owned-company was in charge of business in telecommunications and post field (previously, VNPT's business activities had followed the directions of DGPT). In 1995 the government ended the monopoly on provision of telecommunications services of VNPT as it granted licenses to two new entrants (Viettel and SPT). In 1997, two other companies were licensed to provide internet services (FPT and Netnam).

The telecommunications development goals in Vietnam from 1996 to 2020 extracted from the national development strategies in periods 1996-2000, 2001-2010, and 2011-2020 are demonstrated in Table 1, as follows

Table 1: Overview of telecommunications development goals

Indicators	1996-2000	2001-2010	2011-2020
Percentage of fixed line subscribers	5	16	25
Percentage of mobile phone subscribers	-	26	140*
Percentage of internet subscribers	-	12	20 (fixed broadband internet) 40 (mobile broadband internet)

¹ Decision no 74 issued on April 7th 2006 by the Prime Minister approving the program on provision of public-utility telecommunications services towards 2010

Percentage of households having fixed line	-	-	45
Percentage of households access internet	-	-	40
Percentage of communes having fixed line	almost	100	100
Percentage of communes access internet	-	-	100

*: The target till 2015

Source: MIC

-.: no data

The figures in the Table 1 show the ambitious targets, especially for mobile phone and the internet services. Beginning at 1996 as Vietnam set up the first telecommunications development strategy (Decision 110)², the objective of tele-density until 2000 was merely 5 fixed lines, and no any target for other telecom services. However five years later, in 2001 the target for fixed line until 2010 climbed up to 16 phone sets per 100 inhabitants, the figure of internet subscribers was targeted at 12 percent, and 26 percent was the target of mobile phone subscribers rate (Decision 158)³. Furthermore, in 2012 Vietnam addressed high targets that would gain by 2020, such as the penetration of fixed broadband internet would be 20 percent, the percentage of mobile phone broadband internet subscribers would be 40 percent and the term for mobile phone would be 140 percent (Decision 32)⁴. In 2012 Vietnam was also ranked the 10th in Asia in terms of the volume of the internet users (White book, 2013).

Regarding universal services, prior to 2005 Vietnam did not yet emphasize on universal services. Until 2006, the first universal services policy was introduced (the Program on the provision of public telecommunications services until 2010) and in 2005 VTF, an entity belonging to MIC, was established to support provision of universal services. Subsequently, 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)⁵. However, the second program was postponed and reformulated due to underestimate the pace of technology development and the incompatibility with the existing ICT infrastructure and other national policies of rural development (Report 74)⁶. Ultimately, on July 24th, 2015 the government issued the another program, the Program on provision of public telecommunications services until 2020 (Decision 1168),

4. KEY STAKEHOLDERS IN IMPLEMENTING THE PROGRAM

4.1. The first program on provision of public telecommunications services until 2010

In this section the paper outlines some key contents of the first program on provision of public telecommunications services until 2010 that was deployed from 2005 to 2010.

In response to commitments to the World Trade Organization as Vietnam has become a member since 2006 and aiming at bridging the digital divide between urban and rural areas, since 2005 the Vietnamese government has focused on developing universal services by eliminating the cross-subsidization mechanism, establishing VTF, and formulating programs on provision of universal telecommunications services and integrating them

² Decision no 110 issued on February 22nd 1997 by the Prime Minister approving the national development strategy on Posts and Telecom period 1996-2000.

³ Decision no 158 issued on October 18th 2001 by the Prime Minister approving the national development strategy on Posts and Telecommunication to 2010 and orientation to 2020.

⁴ Decision no 32 issued on July 27th 2012 by the Prime Minister approving the national telecommunication development strategy to 2020.

⁵ Decision no 1643 issued on September 21st 2011 by the Prime Minister approving the program of provision of universal services period 2011-2015.

⁶ Report of MIC on the implementation of the Program on provision of public-utility telecommunications services towards 2010

into the other national programs (Lee, 2011; Dung, 2012).

In 2006, the government issued the first universal service policy, namely the Program on provision of public telecommunications services until 2010. The first program (hereinafter the Program 74) was carried out within five years, from 2005 to 2010. The total of budget was approximately 260 million US dollars mainly collected from a share of the annual revenue of the incumbent providers: 5% of the mobile services revenue, 4% of the revenue of international telephone services and international line subscription service, and 3% of the revenue of domestic distant telephone services and domestic line subscription service (since 2008 these rates were reduced to 3%, 2% and 1% respectively - Decision 186⁷).

The main targets of the Program 74 were the tele-density would reach 5 phone sets per 100 inhabitants; all communes throughout the country would have at least 1 tele-centre; 70% of communes in the whole country would have at least a public internet access centre; and all citizens would have access to the emergency telephone services (Decision 74). This is the first time Vietnam introduced a clear definition of universal services. Accordingly, universal services, the so-called public telecommunications services in Vietnam, included universal and mandatory telecommunications services. In which, the universal telecommunications services were standard telephone services and standard internet access services; and the mandatory telecommunications services were emergency calls (such as medical first aid, social order and security incidents, fire extinguishment, telecommunications services in searching and rescuing, and preventing and fighting of natural disasters), and fixed telephone number inquiries. The Program 74 benefited all inhabitants and households either connecting universal services at home or using these services at public telecommunications services centres. All of beneficiaries had to live in areas (communes) having the tele-density below 2.5 sets per 100 inhabitants (Decision 74).

After five years, the Program 74 achieved remarkable success, such as the tele-density reached 16 lines per 100 inhabitants (increased threefold from the initial

objective); the penetration of internet was 0.32% in 2009 (increased almost twofold compared to that in 2004); 97% of communes in the whole country had at least a public telephone centre; and all citizens were free to have access to mandatory services (Report 74). The results of the Program 74 made a great contribution to reducing the digital divide as well as facilitated development of society and economy. To gain such the achievements, the role of MIC, users and incumbent providers were very substantial. Moreover, the establishment of VTF has been considered as an ideal starting point to implement reform of universal services provision (Lee, 2011).

Besides, some objectives of the Program 74 did not reach yet. Merely 55% of communes throughout the country had a public internet access centre and only 40% of households in universal services areas had a fixed-line (Report 74). The range of universal services was still limited as majority of them were fixed lines and dial up internet access (Decision 43)⁸. The provision of public telecommunications services was mainly implemented via form of order or assignment, not by bidding or basing on market mechanism (Circular 05)⁹.

4.2. Key stakeholders in implementing universality of public telecommunications services

a) The initiatives implemented in Vietnam

In this section, the authors analyse initiatives implemented by the Vietnamese government as well as look at stakeholders in deploying the Program 74 to clarify their role.

‘Knowledge deployment’ and ‘Mobilization’

Although not part of the Program 74, a pilot project cooperated between MIC with Bill and Melinda Gates Foundation (BMGF, a non-government organization) made a contribution on improving the computer usage and the internet access ability of rural dwellers. The financial total of this project was 2.6 million USD. In which VTF¹⁰, VNPT, Viettel, and some bodies contributed 500,000 USD, the rest of 2.1 million USD was funded by BMGF. This project that deployed within 18 months (from February, 2009 - October 2010) delivered the training courses to 336 staff of 99 public tele/internet centres, and community libraries.

⁷ Decision no 186 issued on December 3rd 2007 by the Prime Minister referring to adapting the Decision no 191 issued November 8th 2004.

⁸ Decision no 43 issued on November 2nd, 2006 by MIC referring to the list of public utility telecommunications services

⁹ Circular no 05 issued on November 6th, 2006 by MIC referring to guiding on implementing the Program 74.

¹⁰ MIC was the representative of Vietnam to receive the finance and mandated VTF to manage the project.

Through this project 4,000 local dwellers, and 87,000 people already known about these centres/libraries and the benefit of internet. The project also attributed partly to introducing advances of ICTs to rural citizens and assisting them in access to the internet (BMGF)¹¹. More importantly, due to the significant achievements of the pilot project BMGF has funded more 33 million out of a total of 50 million US dollars to expand the pilot project from 2011 to 2016. The project now is deploying at 2,000 post and telecom centres and libraries in 40 provinces across the country by supplying computers and providing training courses to local dwellers.

‘Subsidy’

To enhance the development of universal services MIC introduced various types of subsidy for inhabitants, households, and telecom providers.

Regarding inhabitants and households, having identified the importance of promoting demand of users MIC subsidized dwellers and households living in universal service areas to install telephone and internet connection. Accordingly, individuals and households were reduced the fee of the connectivity, subsidised a part of monthly subscription fee, and received the end-devices (such as modems and telephone sets). With local inhabitants without setting up telephone or Internet connection at home, they could also access the services available at public tele/Internet centres that were financed by the government as well.

Regarding the telecom providers, in order to assist telecom carriers in delivering the universal services, MIC issued Decision 17 dated June 15th, 2007 (the Decision was later replaced by the Decision 40 on July 2nd, 2008) stipulated that telecom carriers would be received subsidies to maintain and develop telephone/internet subscribers and public tele/internet centres. Basically, this was the funding supported telecom providers to sustain their infrastructure in the unprofitable areas. However, it could not offset the cost of the telecom providers’ investment. This funding was just a catalyst to lead them to preoccupy place prior to their rivalries.

Furthermore, MIC also provided soft loan to these operators in order to support them to upgrade and develop their infrastructure. However, because the procedure of loan was complicated and costing time,

the loan interest was not really attractive to these operators. The amount of money disbursed solely reached 25% of planned budget (Report 74).

‘Knowledge building’, ‘Innovation directives’ and ‘Standard setting’

Basically, the Vietnamese government neither deployed any initiative to support research institutes or universities to do research and development in the universal services field, nor issued directives and set up standards to promote the usage of universal services. It seemed that it was the first time to emphasize on providing universal service and with limited budget Vietnam did not have adequate experience to deploy the program. They did not stimulate research and development in universal services such as which technology or universal services were suitable with local users’ ability and need. The government only implemented some simple ways to subsidize both for rural dwellers and telecom carriers.

b) The stakeholders carried out the provision of universal services

This section shows how these stakeholders carried out the Program 74 or how these initiatives mentioned above related to these stakeholders.

The government

At the country level, MIC played a critical role in formulating, controlling, and deploying the Program 74 and influenced other stakeholders via these initiatives depicted above.

To meet the requirements of international agreements (WTO and the Bilateral Trade Agreement between Vietnam and the US), and promote further the provision of universal services in rural areas, in 2005 Vietnam established VTF (the Vietnam utility public telecommunication services Fund) to support delivering universal services to rural. The Prime Minister in 2006 introduced the first universal services policy, namely the Program on provision of public telecommunications services until 2010 to subsidize rural dwellers to have access to telephone services and dual internet connection service, and support telecom providers to provide universal services.

In 2006, MIC issued the Circular 05 to guide the implementation of the Program 74. Specifically, MIC

¹¹ Report on the pilot project for improving computer usage and public internet access ability. Vietnam Public utility telecommunication service Fund, 2010.

regulated any telecom carriers interested in providing universal services had to build their own plans and submit MIC for approval, such as: the plan for building up new telecommunications networks or upgrading the existing infrastructures; the plan for maintenance, development of tele, and public internet centres; the plan for increasing the penetration of universal services (telephone and internet access subscribers). After MIC approved these plans, these providers provided universal services in the planned areas. In other words, MIC funded these telecom providers to maintain and build up infrastructure and public telecom/internet access centres as well as subsidized rural dwellers via funding the telecom providers (not directly funding to the users).

Besides, MIC also cooperated with Bill and Melinda Gates Fund to run the pilot project to increase the knowledge of rural inhabitants about the benefit of internet.

International organizations

In the process of the liberalization of the telecommunications sector, Vietnam coped with difficulties, such as: lack of capital and management skills. International organizations played an important role in the development via official development assistance (ODA). The capital mostly came from developed countries (Japan, Europe) and international financial organizations, like ADB and World Bank. This money was usually used to develop telecom infrastructures.

There is no specific data showing the funding of the international organizations for investment in the infrastructure in this period. However in period 2001-2003, the government offered VNPT a soft loan allocated from ODA to set up new telecommunication infrastructure in rural and remote areas. The total loan was roughly 39 million US dollars and accounted for 3% of total of investment capital of this incumbent¹². Although accounting for a small portion of investment capital total of VNPT, this loan also contributed to forming and expanding the networks in rural and remote areas and facilitated provision of basic telephone services.

Policy intermediaries

According to Papazafeiropoulou & Pouloudi (2000), policy intermediaries are organizations acting between government and companies (not between providers and end consumers) or citizens. As such, in the Vietnamese case policy intermediaries were incumbent operators.

One of the key factors leading to the boom in using universal services was the fierce competition between telecom services providers. In which the subsidy from the government was a catalyst leading them to enter the rural market.

In this period, there were nine carriers licenced to provide telecommunications services (Dung, 2012). Due to the infrastructure competence, only four operators took part in supplying universal services: VNPT, Viettel, Electricity Telecom Company (ETC) and Vietnam Maritime Communication and Electronics (Vishipel). In which, Vishipel was funded to provide universal services to fishermen and the rest of these operators delivered universal services to citizens living in rural and mountainous areas.

With the position of a dominant operator and owning the infrastructure gone across the country, VNPT had a great advantage over its competitor in providing telecommunication services. However, this position was strongly affected by emergence of Viettel and ETC as in 2004 Viettel initially provided mobile phone services¹³ and in 2005 ETC was the first player supplying fixed wireless GSM phone services. Under high pressure of the rivals, VNPT had to usually reduce the price of telephone and mobile services and adapt the way of charge the services, shifting from charging calls over every one-minute to charging only the first one minute and every 6 second time for later. Furthermore, to stimulate more using telecom services these carriers constantly introduced promotion programs, such as no charging for installation, free for subscription fee within 3 - 12 months (or longer, depending on each promotion program of the carriers), and free for telephone sets.

On the other hand, the provision of fixed wireless GSM phone services in Vietnam was also a reason resulting in the growth of telephone subscribers in rural areas, especially in 2007 as VNPT and Viettel started introducing the new technology/service. This service helped consumers easily to bring their

¹² Project on establishing Vietnam Public Utility Telecommunication Service Fund. MIC, 2004.

¹³ Although Viettel had provided telephone voice service (VoIP) in 2000 and landline service (PSTN) in 2003, they

really developed aggressively in 2004 when it supplied mobile phone services, ended the monopoly of VNPT (in mobile phone services) and brought a newly charging way to consumers.

telephones anywhere with a certain distance. Besides, the fee of this service was the same as the one of the fixed line.

By intense competition between the providers and the appearance of the new service, the volume of telephone subscribers considerably increased. In the period 2005 - 2010, VNPT developed 1 million telephone subscribers, Viettel had 1.2 million and 400,000 telephone subscribers for ETC (Report 74). This made a great contribution to growth of tele-density in rural and remote areas from 2.5 lines in 2004 to 16 lines per 100 dwellers at the end of 2010.

Companies

Although companies locating in rural and isolated areas were not main targeted subjects of the Program 74, it was likely that they also got benefits. As the new telecommunication networks just developed that could help companies to have access to the internet and use telephone services on their business. Particularly, via using the internet or telephone

services farmers/fishermen might find out distributors or customers who were able to help them deliver and consume their products.

Citizens

Basically, the Program 74 has brought a great benefit to rural dwellers. According to the Report 74, till the end of 2010 more than 20 million inhabitants (appropriately 24% of national population) in 4,349 communes got subsidy from the Program. They were not only supported telephone sets, modems to have access to the internet, but also funded part of monthly subscription fee. By the Program, 2,648,492 fixed lines at home were installed and the tele-density in rural and remote areas aggressively increased, from 2.5 in 2004 to 16 fixed lines per 100 citizens in 2010. Moreover, citizens living in mountainous and isolated were also accessible to more than 3,000 tele-centres as well.

The figure 2 demonstrates the relation between the key stakeholders in implementing the Program 74.

Figure 2: The relation between the stakeholders in implementing the Program 74

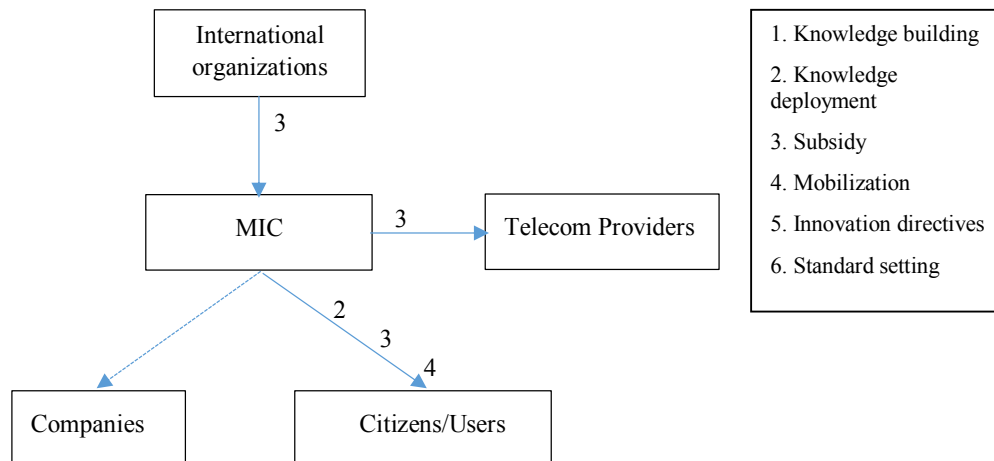


Table 3: Description of relations

Relations	Forms
MIC-International Organizations	Official Development Assistance
MIC - Telecom providers	Subsidy and soft loans
MIC - Citizens	Subsidy
MIC - Companies	Developed networks

4. DISCUSSION AND CONCLUSION

This paper analyses stakeholders on implementing the universal services policy by applying theory of stakeholders and qualitative methods with Vietnam as a case study. The empirical findings show that stakeholders have a substantial impact on the success of the universal service policy, especially the role of MIC and telecom providers.

It is apparent that since Vietnam introduced the first universal service policy in 2006, the usage of universal services was accelerated considerably, the number of telephone subscribers (in 2010) tripled compared with the initial objective of the program (in 2005) and 97% of communes in whole country had a public telephone centre. To gain such results, MIC and incumbents carriers played a critical role.

The role of MIC was considered as a central position in creating a game and issuing rules for other stakeholders playing. By its position MIC introduced initiatives to stimulate demand in using universal services as well as to subsidise telecom providers to maintain and develop universal services and public tele/internet centres. Accompanying with the development of economy the need for telecom services was also increasingly rising, the government's subsidies supported rural inhabitants to be able to use universal services. Besides, these subsidies for telecom operators was also an important element. It was considered as a catalyst to lead them to engage in delivering telecom services in non-profit areas.

Whilst, creating a competition environment for telecom providers was also the utmost importance. In a fierce competition environment, in order to survive and to develop telecom providers had to find the appropriate strategy to compete and occupy market. They designed effective promotion programs and provided appropriate telecommunication services that boost further the penetration of basic telephone services in universal service areas.

Although this web of stakeholders demonstrates the key stakeholders implementing the universal services policy and relations among them, it does not illustrate the interests of these stakeholders. Basically, it is only one-way-relation in which the national government is the central position and influences other stakeholders. Hence, there is a need for further research that may research the interests of stakeholders through improving this model. In other words, what benefits they may get as they participate in deployment the policy and what impact they exert on other

stakeholders are also necessary to be shown in the web of stakeholders.

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