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## **A STUDY ON UNIVERSAL SERVICE IN VIETNAM FROM AN INSTITUTIONAL PERSPECTIVE**

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### **Abstract**

Applying the institutional theory to examine the universal services policy in Vietnam, the paper looked at the institutional factors influencing the formulation and deployment of “the Program on provision of universal service till 2010”. The formulation of universal services policy in Vietnam was remarkably affected by directives of the Communist Party of Vietnam as well as the international commitments that Vietnam participated in. It is of a different feature compared to other countries. Furthermore, the implementation of this Program revealed the loose co-operations between central government (Ministry of Information and Communications - MIC) and the department of provincial governments (Departments of Information and Communications - DICs) as well as DICs and telecom providers in supervising the implementation of this Program. Consequently, telecom providers overlapped in provision of universal services, and households could get the same subsidies from two or three operators. The outcome of this paper recommends that the central government should emphasize the role of DICs and encourage them to be more involved in the formulation and implementation of universal services policy.

**Keywords:** Universal services, telecommunications, institution factors, rural areas, policy

### **1 Introduction**

The concept of universal service in telecommunication sector has emerged since the liberalization of the field (Calvo, 2012). It has constantly changed and been expanded (Alleman et al., 2010; Msimang, 2012). Previously, universal service was regarded as the provision of basic voice telephone (Garnham, 2001; Levin, 2010; Msimang, 2012) with an affordable price. However due to the rapid development of technology, the integration between voice and data service, and the emergence of high-speed broadband networks the concept of universal service is nowadays being extended to include dial-up and broadband internet in its scope (Levin, 2010; Msimang, 2012). Furthermore, in some parts of the world broadband connection nowadays covered 100% of households (Europe in 2013) and their next target has fastened the speed of broadband up to 50Mbps (European Commission, 2013).

Apparently, the scope of universal service is increasingly evolving. The policy plays a critical role in stimulating the development of ICTs in general and telecoms services in particular (Falch, 2007). The universal service policy is also a useful instrument to close the digital divide between users (low and high-income users) and areas (low and high-cost areas) in a nation (Blackman & Srivastava, 2011). 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. Similarly, Laffont & Tirole (2000) posit that the objectives of universal service are redistribution towards low-income residents and provision of more potential benefits to rural areas (regional planning).

They point out that universal service “ensures the quality of telecommunication services at affordable rates to consumers, including low-income consumers, in all regions of the nation, including rural, insular, and high-cost areas.”

In order to close the gap, there are various factors essential to explore. In other words, there is a wide range of ways that governments are able to pursue, such as market liberalization, promotion of competition, raising awareness of ICT benefits, improving the skill of ICT usage, and making it affordable and more attractive to users (Kelly & Rossotto, 2012). More specifically, a number of authors have studied the role of the government (Falch, 2007; Fan, 2005; Gillett et al., 2004; Kalra & Borgohain, 2004; Lee & Chan-Olmsted, 2004; Picot & Wernick, 2007; Thai et al., 2015), some have presented new models (Falch & Anyimadu, 2003; Falch & Henten, 2010; Peha, 1999), and others have identified factors influencing the adoption of internet/broadband (Chaudhuri et al., 2005; Choudrie & Dwivedi, 2006; Choudrie & Lee, 2004; Flamm & Chaudhuri, 2007; LaRose et al., 2007; Long, 2010). All of these research implicitly or explicitly point out the way bringing more advance of ICTs into unserved areas or for low-income users.

Following this mainstream, this research was adopted to analyze the universal service policy from an institutional perspective, with the empirical case from Vietnam. Specifically, the research attempted to examine institutional factors relating to universal service in Vietnam from 2000 - 2010, how these factors related to each other, and which type of institutional factors Vietnam should focus on building and implementing the policy.

To answer these questions, the paper applies the Koppenjan & Groenewegen (2005)‘s four-layer model “levels of institutional analysis” to look at the universal service policy in Vietnam. This model was designed by analyzing the role of institutions in the context of complex technological systems. Moreover, the documentary analysis also is recruited to evaluate secondary documents gathered from Ministry of Communications and Information, Vietnam Public Utility Telecommunication Service Fund (VTF), and some data from ITU and the World Bank. The paper also conducted some interviews with officials working in MIC, DICs, and VTF in July 2015. In which, MIC is a central government body in charge of governing telecommunications and post field as well as issuing regulations and legal documents throughout the country; DIC is a department of provincial governments in charge of governing telecommunications and post field in their province; VTF who is an organization belonging to MIC is responsible to collect financial contributions from telecom providers as well as provide telecom providers subsidy to deliver universal services.

The paper is structured as follows: Section 2 presents the theoretical framework and research method, section 3 analyzes institutional layers in Vietnam, and section 4 is discussion and conclusions.

## **2 Theoretical framework and research method**

### **2.1 Theoretical framework**

The concept of institutions is very diverse and depends on the ways approached (King et al., 1994; Scott, 1987). Overall, Scott (2005:408) argues that institutional theory looks at the processes and mechanisms that form structures, rules, and routines in order to explain social behavior. By a historical approach, he looks at institution theory as a process of instilling value, a process of creating reality, a class of elements, and as a distinct societal sector (Scott, 1987). From an analysis approach, he categorizes institution theory into three perspectives: rational choice, normative, and cultural-cognitive perspective (Scott, 2005). Rational choice perspective accounts for social behavior via examining rule systems created by individuals to promote and protect their own interests. Normative perspective refers to values and norms that introduce preferences, desires, evaluations, and rules into social life. Finally, cultural-cognitive perspective as “the shared conceptions that define the nature of social reality. This reality is

developed in social interaction among individuals as they create and share interpretations of what is going on, on both micro and macro levels” (Scott, 2005:411). Basically, through understanding institutions, we may know and explain social behavior.

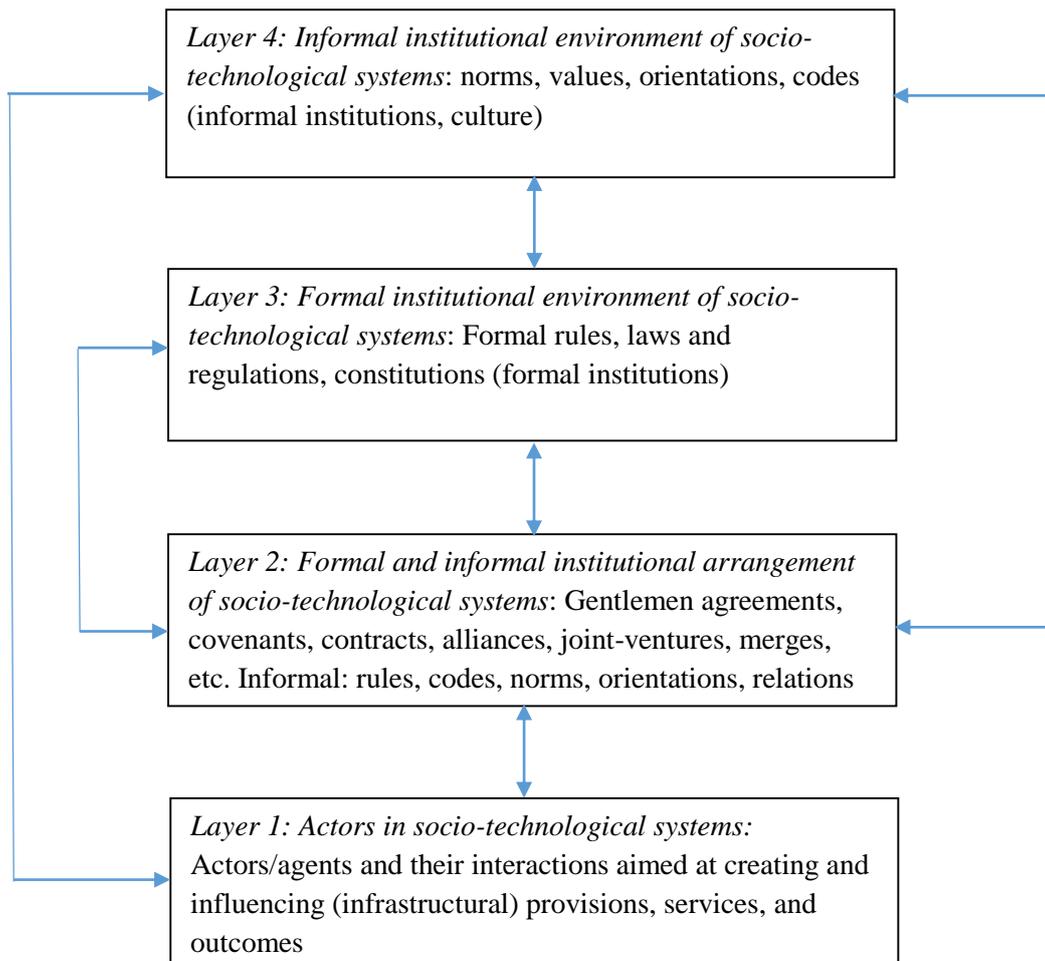
Specifically, approached from an economic view or a rational choice perspective (as clarified above by Scott, 2005), North (1990:3) defines institutions as “the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction”. Institutions are formed to guide human beings into interaction and to reduce uncertainty in their daily life (North, 1990:6). North (1990:35) also asserts that a model of institutions is made up of three elements: informal constraints, formal constraints, and enforcement. Informal constraints are codes of conducts, norms of behavior, and conventions and are a part of culture. Formal constraints are formal rules, from constitutions, to statute and laws, to bylaws, and to individual contracts. Formal rules are created and evolved along with increasingly complex societies, and can complement and increase the effectiveness of informal constraints (North, 1990). Ultimately, enforcement as a body that enforces parties effectively to obey contracts or agreements. More importantly, North (1990:53) concludes that a mixture of three factors will define the choice sets and result in outcomes.

More practically, King et al., (1994) look at the diffusion of information technology innovation under the role of institutions. According to King et al., (1994) an institution is any existing social body that influences and regulates over other social entities. They point out that incorporating institutions will create a link between social concepts such as ‘society’ and ‘culture’, and entities such as organizations, firms, groups, and individuals. In the research, they posit that releasing critical institutions factors is to facilitate the diffusion of information technology innovation.

Similarly, Koppenjan & Groenewegen (2005) examine complex technological systems considered as multi-actor systems including not only technology aspects but also behavior of actors. They define institutions as “a set of rules that regulate the interaction between parties involved in the functioning of a (technological) system”. To design/redesign complex technological systems they argue that aside looking at technological challenges it is also necessary to analyze an institutional structure that coordinates the positions, relations, and behavior of the parties in this system. It will make these systems more stable and reduce the transaction costs between parties. This coordination can be shaped informal laws or of an informal nature.

To function technology systems or institutional design, Koppenjan & Groenewegen (2005) introduce a four-layer model which offers the building blocks for identifying the steps to be considered in processes of institutional design. The first layer is the level of individual actors (like firms and households) and their interactions in the context of a complex technological system in order for creating and influencing provisions, services, and outcomes. The second layer is formal and informal institutional arrangements of socio-technological systems. At this level, agents in networks create regimes or mechanisms to coordinate the transactions relating labor, capital, intermediate goods, information, and so on. Formal arrangements are contracts, joint ventures, strategic alliances, etc. Informal arrangements are codes of conduct, norms, and relations. The third layer of the model is legal rules that are the formal rules of the game. The layer determines the legal positions of the players of the game and the mechanism available to coordinate transactions. The last layer includes elements such as culture, values, norms, attitudes. They are the informal institutional environment and they influence significantly on the mindset of actors in networks at layer 1. The layer determines what kind of incentive structures are acceptable and what would be effective.

In the model, these layers interact and influence mutually. The higher layer constrains and shapes the lower ones and the lower layers influence the development of the higher ones.



**Figure 1: The four-layer model (Koppenjan & Groenewegen, 2005)**

Based on the above definitions, institutions may be understood as rules influencing human interaction and reduce uncertainty in society.

## 2.2 Research method

The paper applies the four-layer model of Koppenjan & Groenewegen (2005) to identify institutional factors influencing the formulation and deployment of the “Program on the provision of public telecommunications services till 2010” in Vietnam. Then, the paper examines the interplays between these factors to look at the policy functions.

The paper also recruits the qualitative method to analyze secondary documents such as documents of the Vietnamese government (the data was mainly collected from Vietnamese Ministry of Information and Communication and the Vietnam Public Utility Telecommunication Service Fund) and some data from ITU and the World Bank. The documentary analysis is appropriate to examine public and private documents, and “enables a researcher to obtain the language and words of participants at a convenient time” (Creswell, 2009). Moreover, to complement and robust the documentary analysis, the paper also conducted interviews with some officials working in MIC, DIC, and VTF in July 2015.

In order to apply this model, this research considers the universal service policy as a complex technological system, and institutional factors influencing a complex technological system also impact on the universal service policy.

Since 2005, Vietnam has initially emphasized the provision of universal services by implementing two programs. One program “the Program on the provision of public telecommunications services till 2010” (hereinafter called the Program 74) was implemented from 2005 - 2010. The total budget of this program was approximately 210 million euros. The second is “the Program on the provision of public telecommunications services until 2020” with a total budget of 440 million euros. This second program is being implemented. The paper looks at the process of formulation and implementation of the Program 74.

According to the Program 74, the term “universal service” in Vietnam was regarded as public telecommunications services that included universal telecommunications services and mandatory telecommunications services. The universal telecommunications services were standard telephone services and standard Internet access services; the mandatory services were emergency calls. This concept will be used in the research.

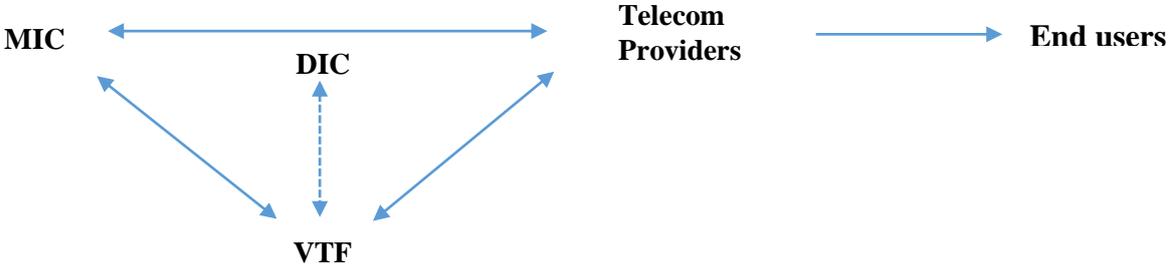
**3 Analysis of institutional layers in Vietnam**

*3.1 Layer 1*

In this layer, actors implemented the Program 74 were diverse ranging from the national level to end users (Thai et al., 2015), including MIC, VTF, DICs, telecom providers (VNPT, Viettel, ETC, and Vishipel), and end users (citizens or households).

The interactions among these actors enhanced the provision of universal service in under or unserved areas. In their study, Thai et al., (2015) argue that all of these actors played a role in deploying the Program 74, especially the role of MIC as a central actor creating the rule of the game. In an interview, an official of MIC who participated in managing and supervising the Program 74 said that “Apparently, MIC played an important role in building up and instructing others actors to implement the Program. Besides, the role of telecom providers was also critical”. According to him, DIC as a provincial body governing ICT activities could have played an important role in deploying the Program 74. Because of their position, they would have drawn provincial ICT development strategies and guided local operators to implement them. However, in the first stage of the Program 74, their role was ignored and not embraced. Local providers based on their business strategies as well as the instructions from MIC, VTF, and their mother company to implement the Program 74. Some areas were very isolated and mountainous local providers did not provide universal services, DICs could not cooperate or guide them to do the provision.

Figure 2 below demonstrates the interactions between these actors in implementing the Program 74.



**Figure 2: The interactions among actors (Circular 05/2006/TT-BBCVT)<sup>1</sup>**

<sup>1</sup> Circular 05/2006/TT-BBCVT: Guidelines for deploying the program on provision of public telecommunications service till 2010

### 3.2 Layer 2

According to Koppenjan & Groenewegen (2005), at this level, actors make institutional arrangements or mechanisms to coordinate the transactions between them. In the case of Vietnam, the mechanism was interactions among these actors in order to deliver universal services. Indeed, this mechanism was administrative orders, not created by a market regime. MIC designed the Program 74 and then submitted to the Prime Minister for approval. After being approved, MIC clarified the Program 74 by issuing a series of decisions or legal documents to instruct and request VTF, DICs, and telecom providers to implement the Program 74.

According to regulations of the Circular 05/2006/TT-BBCVT (as demonstrated in figure 2), MIC requested telecom providers keen on providing universal services to build up their plans and then hand in MIC for approval. Telecom providers' plans basically outlined and depicted their capability and budget needed to deliver universal services. These plans also consisted of estimated numbers of fixed lines, of internet connections, and of public internet access centres that would be developed.

On the other side, MIC requested VTF to construct a plan and submit to MIC for approval. This plan referred to how much of subsidy would be allocated to telecom providers and how much of incumbent providers' annual revenue would be contributed to VTF<sup>2</sup>. Based on the approved plan, VTF delivered telecom providers funding. Beside this administrative orders<sup>3</sup>, the interactions between VTF and telecom providers were also formed through credit contracts. Telecom providers would be provided soft loans within a certain period of time in order to develop infrastructure to deliver universal services.

Another actor participating in making the institutional interaction was DICs. DICs involved in the Program 74 by managing and supervising telecom providers' activities in their province<sup>4</sup>. DICs were assigned by MIC to verify these telecom providers' plans in order to ensure them appropriate with others ICT plans at their local<sup>5</sup>. Actually, the role of DICs in making these institutional arrangements was relatively small. As an official of MIC said "the participation of DICs in confirming the exact number of provision of universal service of telecom providers was late (due to no detail instructions of MIC). Hence, this impacts on delivering subsidy to telecom providers". And a vice director of one DIC in an interview with the first author in July 2015 also said "Many our ideas or opinions in terms of improving the provision of universal services did not be paid attention from MIC. Consequently, some of universal services were not appropriate with their local citizens' needs".

Figure 2 apparently shows that there is no interaction between MIC, or VTF, or DICs and end users, only the interaction between telecom providers and end users. Meanwhile, end users were the main object and beneficiaries targeted<sup>6</sup>. It is likely that the preferences and skill of end users (ability to use computer, advance of the internet) were not paid attention by the government (MIC). The government only provided basic services that they wanted, not from end users' preferences. As a result, many end users gave up using these universal services when the government stopped the subsidy<sup>7</sup>. According to the vice director of a DIC, "the main reason that did not encourage people using the internet was low

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<sup>2</sup> Telecom providers had to provide VTF financial contribution that relied on the annual revenue (Decision 191/200/QD-TTg, and 186/2007/QD-TTg)

<sup>3</sup> MIC also required telecom providers to hand in VTF their plans submitted to MIC (Circular 05/2006/TT-BBCVT)

<sup>4</sup> Circular 05/2006/TT-BBCVT

<sup>5</sup> Ibid

<sup>6</sup> Decision 74/2006/QD-TTg

<sup>7</sup> The government funded dwellers end devices (telephone sets, or modems to connect to the internet), and part of installation fee and monthly subscription fee of universal services via subsidizing telecom providers. However, due to no having real need they stopped using the universal services when the government ended the subsidy (Report on the results of the program 74:pg 27, MIC-2012)

demand. End users, particularly who lived in isolated and mountainous areas did not perceive the advance of the internet. Public internet access centres were mainly used for playing games”.

On the other side, due to the lack of cooperation between DICs, telecom providers, and VTF in supervising the provision of universal services that led to overlapping in delivering universal services. Consequently, households could receive subsidies of a service from two or three providers, and the government had to spend two or three times the subsidy for households (Lam, 2013).

Although telecom providers received funding from the government to provide users universal services, they did not clearly declare their promotion programs which came from the government’s subsidies or from their own budget<sup>8</sup>. They deliberated to make customers understanding that all of the low charges that customers could get was from telecom providers.

### 3.3 Layer 3

Layer 3 is a formal institutional environment of socio-technological systems. It includes legal rules, laws and regulations, and constitutions that introduce the formal rules of the game (Koppenjan & Groenewegen, 2005). Formal rules relating to universal services was not in existence in Vietnam before 1995 (Lam, 2013). Telecommunication services at that time were not prevalent and only used by state-owned enterprises and other organizations (Lam, 2013).

In general, Vietnam has begun the reformation and liberalization of telecommunications market since 1995 (Thai, et al., 2015) by splitting up the regulatory and business function from the Department General of Post and Telecommunications - DGPT (a governmental body, predecessor of MIC today), establishing a state-owned company - VNPT, and granting licenses to more new entrants (Viettel and SPT).

Along with the telecommunication liberalization, in 1995 universal services were initially focused and ruled. However, the definition was very simple, the type of universal services was not clear, and no objective was addressed<sup>9</sup>. The regulatory framework for universal services was gradually built up since the bilateral trade agreement between Vietnam and the United States was signed in 2000 (Lam, 2013 : 154). As such, American telecom providers were entitled to invest in the Vietnam telecom market. In other words, the telecommunication market was now opened to foreigners and other competitors, all telecom providers were on a level playing field, and the government could not allow VNPT (the first state-owned telecom-post company in Vietnam) to apply the cross subsidy regime to deliver universal services. Furthermore, in compliance with international commitments on competition from the World Trade Organization (WTO) and General Agreement on Trade in Services (GATS) on basic telecommunications (Ha et al., 2005), the government also had to give up the price support regime for state enterprises and look for other tools to deliver universal services.

In 2002, the Standing Committee of National Assembly past the Ordinance on Post and Telecommunications (43/2002/PL-UBTVQH10) in which it regulated universal services. Although universal services were defined more specifically, up to 2006 the government had plans to provide universal services (the Program on provision of universal service till 2010 - the Program 74). Based on that MIC introduced a bundle of legal documents and decisions to guide its subsidiaries (VTF and DICs) and telecom providers to implement the Program 74 (around 40 different documents within 5 years 2006-2010<sup>10</sup>).

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<sup>8</sup> Ibid

<sup>9</sup> Article 13 section 2 of the Degree 51/CP only regulated that: VNPT enables provision of basic telecommunication services in whole country (including the isolated and mountainous areas).

<sup>10</sup> At <http://mic.gov.vn/vtci/Pages/ThongTin/114206/Cac-van-ban-lien-quan.html>. Accessed at April 28, 2016

In this formal institutional environment, beside the Program 74, Decision 191/2004/QĐ-TTg (Decision 191) and the Circular 05/2006/TT-BBCVT (Circular 05) could be seen as the most important regulations stipulating entirely interactions between actors (in layer 2) as well as activities that these actors had to perform. The Decision 191 permitted MIC to establish VTF in order to manage and supervise subsidies as well as collect financial contributions (mainly from telecom providers). The Circular 05, as depicted in the previous sub-section, regulated all activities that VTF, DICs, and telecom providers needed to do for providing universal services.

### *3.4 Layer 4*

Layer 4 is an informal institutional environment of social-technological systems including the informal rules (culture, values, norms, and attitudes) of the game and they have influences on the mindset of actors in level 1 (Koppenjan & Groenewegen, 2005).

According to Lam (2013: 144), the Vietnamese law in general and universal services policy, in particular, is influenced by a complex mixture of neo-Confucian concepts of “virtue”, French colonial legality, and revolutionary and war morality. Additionally, law and legal regulations are closely tied to policies of Communist Party of Vietnam-CPV (Lam, 2013). The policies of CPV affect all aspects of society from the highest legislative body (the Vietnamese National Assembly) and the highest administrative body (the central government) to the lowest administrative level (communes). Chief officials at all levels are selected and appointed by CPV (Lam, 2013). Policies in the telecom sector are also influenced by policies of CPV. In 2000, CPV introduced Directive 58-CT/TW (2000), namely “Enhancing the application and deployment of ICT to support the national industrialization and modernization”, in which CPV addressed targets that basic telecommunications (and postal) services would be achieved by the end of 2010 (Lam, 2013). Based on the Directive, the government built up telecommunication and post developments strategies as well as other social - economic development strategies.

On the other side, the administration system in Vietnam affected by French colonial legality is divided into three levels: province, district, and commune<sup>11</sup>. At the province and district level, they have departments or divisions that manage and supervise all activities relating to society, economy, security, culture, etc. in their location<sup>12</sup>. As such, DIC as a department of provincial government is responsible for all ICT activities in their province.

Apparently, this informal institutional environment is not direct legal rules<sup>13</sup>, however, they influenced directly level 3 (formal institutional environment) and almost all actors in level 1 (MIC, DICs, state own operators, and VTF).

## **4 Discussion and conclusions**

In Vietnam, building up telecommunication policies in general and universal services policies, in particular, was considerably influenced by directives of CPV. Although, CPV is not a legislative body, neither an executive entity, and nor a judicial branch, they control over all government systems and society (Lam, 2013). They also appoint officials and administrators at various levels, particularly to the highest positions in the key state organs (Lam, 2013). And these officials and administrators will specify these CPV’s directives by issuing legal documents to carry out. The Program 74, one of the outcomes of clarification of CPV’s directives, was specified by the Prime Minister from the Directive 58-CT/TW

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<sup>11</sup> Law on Organization of Local Administration (77/2015/QH13).

<sup>12</sup> Ibid

<sup>13</sup> Policies of CPV are not laws as well as legal regulations. However, all members of the government are also members of CPV. Furthermore, CPV introduces the Prime Minister to the National Assembly for voting. Hence, CPV’s strategies and directions are considered as binding directives for the government (Lam, 2013).

(2000)<sup>14</sup> of CPV. In other words, it is likely that Vietnam is pursuing the developmental approach in telecom sector that includes facilitating the social-economic growth, inventing directly in the market, and financing and tax incentives (Falch et al., 2016).

Besides, the formulation of the Program 74 also resulted from the international commitments of Vietnam, especially the Bilateral Trade Agreement between Vietnam and the United States. Opening the telecommunication market means that other operators will enter and compete in this telecommunication market, all providers will be on a level playing field. Consequently, the government had to eliminate the cross subsidy regime applied for VNPT and looked for other tools to deliver universal services.

In the process of implementing the Program 74, the interactions between DICs and telecom providers as well as between MIC and DICs were not streamlined. The interaction between MIC and end users was not in existence. In other words, due to the lack of MIC's guidelines DICs could not play their role in supervising the provision of universal services of operators. These operators delivered universal services as the plans approved by MIC and their own business plans. As a result, many households could receive subsidies of the same service from two or three providers. Furthermore, some of universal services were not appropriate with inhabitants' needs. MIC only offered universal services that they had, not services inhabitants needed. Finally, many households gave up using these services when the Program 74 stopped funding.

Hence, the government should emphasize the role of DICs in supervising the provision of universal services of providers as well as encourage them to be more involved in the formulation and the implementation universal services policy. As a vice director of a DIC said "MIC cannot understand dwellers' preferences and characteristics as DICs do. The provision of universal services will be really effective if MIC decentralize their budget and rights in deploying the program". MIC may not directly and constantly interact with end users, DICs will represent them to contact their local citizens to recognize what is the real demand for universal services.

Based on the institutional theory, the paper pointed out that institutional elements influencing the universal services policy (the Program 74) in Vietnam such as informal institutional environment (the directives of CPV) and formal institutional environment (international commitments). This research also showed that the interactions between these actors in deploying the Program 74 were transacted via administrative orders, not by a market regime. All activities relating to provision of universal services were performed as the instructions of MIC. Telecoms providers had to set up plans and submit MIC for approval. Although the Prime Minister regulated the auction to select carriers delivering universal services, it is likely that MIC preferred the form of 'order place' or 'plan assignment' imposed on operators.

This research has some limitations. Examining the Program 74 within a certain period of time to evaluate the policy of universal services in Vietnam may not reflect all aspects of this universal services policy. Besides, this research has not yet analyzed the influence of layer 4 (culture, values, norms, and attitudes) on end users' preferences and behavior (layer 1) for universal services. Future research should look at more another program (the Program on the provision of public telecommunications services until 2020) in order to get more insight into this policy.

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<sup>14</sup> Project on establishing Vietnam Public Utility Telecommunication Service Fund. MIC, 2004.

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